Gleanings in Bee Culture

ESTABLISHED 1873

CONTENTS

JUNE, 1936

Honey Markets	324-325
Solving Beekeeping Problems—M. G. Eldred	329-331
What About Comb Honey—Roy Rabbitt	332-334
Simplified Queen Introduction—Emil F. Fernes	335-336
The Confectionery Industry—John B. Aitchison	337-338
American Honey Institute Notes	338
Picture Page	339
Whence Come Eggs in Cups?—Allen Latham	340-341
Bees on the Road—W. H. Hull	342-343
"Dunk" Queens as Well as Bees—H. J. Rahmlow	343
Effective Swarm Control—E. S. Miller	343-344
On a Hive Seat—K. A. Gallant	344
265 Stings at Once—Harold I. Perrin	344-345
Uvalde, Texas, Celebrates—H. B. Parks	345-346
Robber-Proof Entrance Guard—G. P. Beyleveld	346
Bonanza Hybrid Queens—H. D. Tennent	346-347
Comments on Current Items—J. F. Dunn	347-348
Spinster Jane Says—	348
Just News	349
Heads of Grain from Different Fields	350-351
Editorials	352-354
From North, East, West, and South	355-362
An International Exhibit of Honeys—Arlene Weidenkopf	363
Honey Used to Sweeten Coffee	363
Talks to Beginners—M. J. Deyell	364-365
Gleaned by Asking—The Editors	366-367

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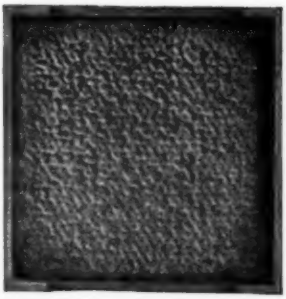

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Honey Markets

California Points: Southern California—The orange flow was very short and irregular, ranging from 10 to 70 lbs. to the colony, with most reports running between 20 and 30 pounds. Weather conditions are still unfavorable, with rain needed if the late flow is to be substantial. The honey market has been rather quiet and unsettled. Most eastern dealers have ample supplies for the present. Few sales reported, per lb., f. o. b., southern California delivery points: Orange, new crop extra white to water white, 5½-5¾c; few, 6c; white, 5-5¼c; mostly, 5c; buckwheat-sage, old crop, light amber to extra light amber, 4-4¾c; mostly, 4¼-4½c. The market tendency for beeswax has been slightly weaker and offerings have been light. Sales reported at 19-21c, mostly 19-20c per lb., delivered Los Angeles. Imperial Valley: The weather continues dry and rain is reported insufficient to bring up the desert annuals. The valley crop of honey should be about normal, though less than some years ago, due to the decreasing alfalfa acreage. No recent sales reported, and 1935 crop honey is almost exhausted. Northern California—Bees are working on mustard, late lemon, lupines, mustard, and other flowers. The weather has been favorable for the development of star thistle plants. Old crop honey is practically cleaned up; new crop honey offered is mostly of the poorer grades and is moving rather slowly. Sales by beekeepers in ton lots or more, f. o. b. northern California delivery points, reported as follows, per lb.: Extra light amber to white star thistle, 5¼-5⅜c; light amber fruit bloom, 4-4½c; light amber wild flowers, 4-4½c; light amber eucalyptus, 3¾-4c. Only limited supplies of beeswax are available, and the market is firm. Good yellow wax is reported selling at 20c per lb., with some high as 21c per lb., f. o. b. central and northern California points.

Pacific Northwest: West of Cascades—The weather has been favorable with alternating showers and warm spells of several days' duration. As a result, bees have built up exceptionally well during the past six weeks. Vetch is growing well and is already yielding. Bees have been working actively on fruit bloom, dandelion, currant, mustard, cascara, blackberries, and on vine maple, which is reported yielding better than for several years. No sales reported of honey but beeswax is moving actively at mostly 19-20c per lb. delivered Portland, which is slightly lower than quotations of two weeks ago. East of Cascades—Temperatures have varied, with considerable cool, windy, rainy weather. Apple bloom continued during the first part of the period, followed by locust, dandelion, wildflowers. As spraying is now in progress, bees have generally been moved from the orchards. Alfalfa and sweet clover are growing well and will soon be in bloom. Bees are building up rapidly and getting ready to swarm. Sales reported light amber alfalfa-sweet clover, 60's, 6-7⅛c; small pails, 7 3-5-8½c per lb.

Intermountain Region—Supplies of honey are extremely light with both comb and extracted honey about sold out except for small lots which are moving locally. Some report that the market is inclined to be weaker with the grocers waiting for new crop honey from the South, but in most sections the market is firm and beekeepers are holding firm in price. Very few sales white to extra white sweet clover and alfalfa, ton lots, mostly 5-6c per lb.; small pails, 7-7¼c; few sales light amber 60's, 6c per lb.; small pails, 7½-8c. Dark capping melting honey around 4c per lb. Beeswax, 18-20c per lb.

Southwestern States — Southwestern and south central Texas—The Uvalde district has just completed harvesting the heaviest and best

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Tested Queens	$1.00 each, any number
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For additional lbs. of bees add	60c each, any number

15% Discount to Recognized Dealers Only.

With the greatest demand for bees during April and May came the worst April we had in many years which retarded production and operation, due to cold weather, storms and floods. Many late orders had to be returned unfilled. The month of May is normal and package bee orders have been moving rapidly and will run up into thousands. We wish to thank our many customers for their patronage and patience during these trying times. We are well up with shipping and are now concentrating on better queens. Make ample provisions for requeening. We are prepared to serve you and will fill your orders properly. We are also dealers for Lewis Beeware and Dadant's Foundation at Catalog Prices.

York Bee Company, Jesup, Georgia

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crop of huajillo honey in many years. The honey is water white in color and of the best quality. A 50-pound average yield to the colony is said to be a conservative estimate. Over much of southwest Texas a surplus of more than 20 pounds from mesquite and other brush is now in the hives, with an increasing flow under way. Horsemint is also yielding and where colonies are in good shape a fair surplus is anticipated from this source. Sales reported: water white huajillo, large lots, 6c per lb.; small pails, 7c pails, 6½-7c per lb.; other honey reported per lb.; mixed huajillo-catsclaw, 60's, 7c; small sold at 5c per lb. without cans; bulk comb, 6c per lb. net.

Summary—Warm weather has recently prevailed over most of the country. Rainfall has been rather frequent and widespread, especially in the interior, though it is still dry in parts of the West and South. Bees have built up rapidly on fruit bloom, dandelion, and other sources and have even stored some surplus in the upper tier of states. Unfavorable weather conditions delayed the filling of orders for package bees and queens, but they have been moving into northern producing sections in large numbers, and package bees have built up as rapidly in many cases as wintered-over colonies. Reports of winter and spring losses indicate that almost everywhere losses in colonies which were not protected were exceptionally high, though yards which were well taken care of have generally had only normal losses. The orange flow in California probably did not average more than 20 to 30 pounds to the colony, but a surplus of 50 pounds to the colony from huajillo has been reported from the Uvalde section in Texas and black gum, orange and other early honey is coming on the market in the Southeast. Stocks of old crop honey in the hands of beekeepers are probably the lightest of record since honey became an important crop. Only scattered carlots remain unsold and small lots are extremely scarce. The market for remaining lots of old crop honey is rather irregular.

(Continued on page 373.)

Monthly Report of Honey Producers

Early in May we sent the following questions to honey producers: 1. What is your estimate, revised to date, of the amount of last year's honey not yet sold in your locality? Give answer in per cent. 2. At what price has honey been sold or contracted for, if any, in large lots (carload or less) in your locality during the past month for (a) extracted honey, per pound? (b) comb honey, fancy and No. 1, per case? 3. What are prices when sold to grocers in case lots of (a) extracted honey in 5-lb. pails, or other retail packages in terms of 5-lb. pails? (b) comb honey, fancy and No. 1, per case? 4. What is the retail price to consumers in your locality of (a) extracted honey in 5-lb. pails, or other retail packages in terms of 5-lb. pails? (b) comb honey, fancy and No. 1, per section? 5. How is honey now moving on the market in your locality? Give answer in one word, as slow, fair, or rapid. 6. What is the condition of the honey plants at this time in your locality, as compared with the average? Give answer in per cent. 7. What is the present condition of the colonies, as compared with normal, considering the number and age of bees, and supply of stores? Give answer in per cent. 8. What is per cent of winter and spring loss to date (if any) in your locality? The answers received are tabulated as follows:

State Reporter.	1935 hold-over.	Large lots. Ex.	Large lots. Comb.	To grocers. Ex.	To grocers. Comb.	To retailers. Ex.	To retailers. Comb.	Move-ment.	Cond. honey plants.	Cond. of colo.	Spring loss.
S-Ala. (J. C. Dickman)	5			$.40		$.55		Fair	100	90	25
B. C. (A. W. Finlay)		.10½		.72		.87		Fair	100	90	20
S. Cal. (L. L. Andrews)	3	.05				.60	.14	Fair	20	80	10
SE-Colo. (O. E. Adcock)	8			.45	3.00	.55	.15	Slow	100	75	15
E-Conn. (A. Latham)	7			.75	4.50	1.00	.27	Fair	100	85	4
S-Fla. (C. C. Cook)	0	.06		.40		.55		Fair	100	100	10
C-Fla. (H. Hewitt)	0			.50		.65		Rapid	100	100	8
SE-Ga. (J. J. Wilder)	0	.06½		.50		.65		Fair	100	90	3
NC-Ill. (A. L. Kildow)	0					.50			100	75	45
NC-Ind. (T. C. Johnson)	0			.50	3.00	.60	.16	Fair	100	75	25
NW-Ind. (E. S. Miller)	5			.48	3.00	.60	.15	Fair	100	100	40
W-Iowa (E. G. Brown)	0					.65		Fair	110	75	20
NE-Kans. (J. F. Garner)	0			.50	3.50	.65	.20	Fair	100	100	25
S-La. (E. C. Davis)	2			.35		.50		Fair	100	100	0
N-Me. (O. B. Griffin)	½				4.80		.30	Fair	100	100	7
C-Md. (S. G. Crocker)	5			.60	3.00	.75	.20	Slow		75	40
N-Mich. (I. D. Bartlett)	0							Fair	100	80	18
S-Mich. (F. Markham)	0	.08		.55		.75		Fair	100	90	25
C-Mich. (E. D. Townsend)	0								100	100	10
W-Minn. (B. L. Morehouse)	0	.07½		.50		.65		Fair	80	85	8
E-Neb. (J. H. Wagner)	5			.60	3.50	.69	.20	Fair	100	90	50
NW-N. Y. (G. B. Howe)	5			.50		.65		Fair			15
C-N. Y. (F. W. Lesser)		.08¼		.52		.60		Rapid	110	95	12
NW-N.C. (C. S. Baumgarner)	0			.75		.90	.25	Slow	100	100	10
SE-N.C. (W. J. Martin)	0	.08½		.70		.90	.20	Fair	100	100	10
W-Ohio. (F. Leininger)	0			.50		.70			100	80	18
N-Ohio. (J. F. Moore)				.50	3.00	.75	.18	Slow	90	90	30
C-Ohio. (R. D. Hiatt)	0			.52½		.70	.20	Slow	125	75	10
N. C. Okla. (C. F. Stiles)				.45		.65	.20	Fair	90	80	20
C-Okla. (C. A Baltzley)	0	.06	2.25	.45	3.15	.59	.19		100	85	35
W-Ore. (H. A. Scullen)	5			.40		.55		Fair	100	100	5
C-Pa. (H. Beaver)	0			.50		.65		Slow	90	85	20
SE-Pa. (D. C. Gilham)	5			.70	4.00	1.00	.25	Fair	80	80	40
W-S. C. (E. S. Prevost)	0			.52		.87		Rapid	100	90	10
C-Tenn. (J. M. Buchanan)	0					.75	.20	Slow	90	90	2
E-Tenn. (W. L. Walling)	0								90	90	5
C-Texas. (T. A. Bowden)	2			.45		.55		Fair	80	100	3
S-Texas. (J. N. Mayes)	5	.04	.07½	.25		.35		Rapid	90	100	5
S-Texas. (H. B. Parks)	10	.06		.35				Rapid	100	100	2
W-Vt. (P. Crane)	0					1.00	.25		100	95	4
C-Wash. (G. W. B. Saxton)	0			.43		.50		Fair	100	100	20
SE-Wis. (N. E. France)	5					.55		Slow	100	75	47
N-Wyo. (E. C. Reed)	0			.45		.55		Fair	75	50	50

A Pioneer Beekeeper of Arizona Speaks:

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(Signed) G. H. PAYNE,
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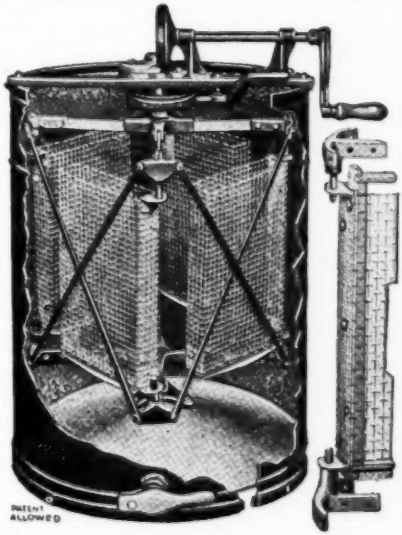

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At some time or other everybody has, but it does not trouble C. A. Walter, of Ohio, nor baby Mae, because they know Dadant's Crimp-wired Foundation may be put in Lewis slotted bottom bar frames so quickly that the swarm will not have time to get away before it is in the hive. So the baby smiles and Mr. Walter hurries on with his work, form board on his lap, a chair for comfort, and two hives for a work bench.

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WHEN YOU PLAN YOUR FOUNDATION BUYING CONSIDER WHAT THIS MEANS TO YOU.

Dadant & Sons, Hamilton, Illinois

DADANT'S FOUNDATION
CHOICE OF EXPERT BEEKEEPERS

Vol. 64
No. 6

Gleanings in Bee Culture

June
1936

Solving Beekeeping Problems

M. G. ELDRED

Keeping Bees as an Avocation Is Even More Interesting Than Trap Shooting or Fishing

M. G. Eldred and one of his skyscrapers.

We are small operators, located near a western suburb of Chicago on U. S. Highway No. 20, a main artery to the coast. We run 60 colonies for extracted honey and retail our product to the automobile trade from a roadside stand. We hope this article will be of some small service to beekeepers similarly situated.

The systems we use for honey production and swarm control are, in many cases, methods that have been developed by others and which we have changed and modified to meet our particular needs.

I have read considerable of late about killing off the bees in the fall with Cyanogas and starting with package bees in the spring. Aside from sentimental reasons, this may be all right, but it does not work out with us. For instance, we purchase 50 packages in the spring and install them on drawn combs with honey and pollen combs to last them until fruit bloom. The queens will be accepted and start laying, but later, upon examination, we find from five to ten colonies queenless.

One of our major problems was how to requeen without loss of time. We tried buying queens from queen breeders, but it would take at least a week to get queens by mail and another week before they were accepted and laying, then another three weeks before we began getting bees from these queens, and by that time the main flow would be over. As one of our greatest beekeepers so truly said, we were raising bees on the honey flow instead of for it.

Now, if a man can devote his entire time to the care of his apiary, management is simplified very materially, because he can raise his own queens and then introduce them as needed, being in a position to observe through frequent inspection whether or not his colonies are queenright. Our case was different. I am employed in Chicago as a machinery sales-

man and have only my spare time to devote to the bees. Many times things important and vital to the proper care of the bees were neglected on account of lack of time and opportunity, and it was impossible for me to raise queens in the orthodox way. My business kept me from the apiary except on evenings, week-ends, and holidays. It became necessary to solve this problem in some other way, and this is how we did it.

Solving Requeening Problem

You will note from the photograph, at the upper end of the row of hives, directly in front of the honey house, three or four one-story hives on bottom boards and stands. This picture was taken shortly before the honey flow on alsike clover began. Later we had a half dozen more small colonies in the same row raising queens.

This snow fence laid a huge bank of snow over the hives so the bees were as snug as a bug in a rug.

The mulberry trees will eventually make good shade in summer and replace the snow fence in winter.

On our inspection of the colonies, when we find a nice queen cell on a comb, we put this comb with adhering bees into one of the queen-raising hives, together with a couple of frames of brood and bees from populous colonies that can spare them; also a couple of combs of honey and pollen and fill out the balance with drawn combs or full sheets of foundation. The queen cell hatches in a few days along with the brood and is accepted at once without question. She starts laying and in a short time is heading a prosperous colony strong enough to protect themselves against robbing during the summer.

When inspecting bees, if a queenless colony is found, how simple and easy it is to unite this young vigorous colony with the queenless one by the newspaper method. What would have become a worthless liability now becomes a strong prosperous colony that is sure to store surplus honey when conditions are favorable. As a matter of fact, in several instances I have taken off a half super of honey from one of these nucleus colonies before uniting with a queenless colony.

Each colony goes into winter quarters with one full depth super or hive body containing ten full-depth or standard combs of capped honey over the brood chamber in addition to the honey in the brood chamber. The hives are covered with a Sisalkraft building paper as protection against wind, snow, and rain. If any colonies are below par I unite one of the nucleus colonies as described above to bring them up to full strength.

Spring Management

We all know that in the spring queens will not lay without a bountiful supply of honey and we are of the opinion that the queens start laying earlier on account of this extra surplus. Of course, the bees use only a portion of these extra stores. When fruit bloom arrives, we take all the brood from the brood chamber except the comb of eggs on which the queen is laying, and put this brood in a super above an excluder, over the brood chamber,

leaving plenty of honey and pollen combs in the brood chamber and at least two combs of honey in the upper super with the brood. We extract the balance of the honey. Sometimes the honey may be slightly granulated. The wet combs are a wonderful bait to draw the bees from the brood nest. This accustoms them to passing through the excluder and prevents the swarming instinct from developing early in the season.

Another thing, this work comes in the spring when one feels more like working and incidentally gives us a fresh supply of honey for market, which having been mixed with fresh honey from the fruit bloom or wild flowers, gives a superior article to sell early in the season before the new crop is ready to extract. This relieves us of some of the extra hard work in the fall and at no loss to us or the bees.

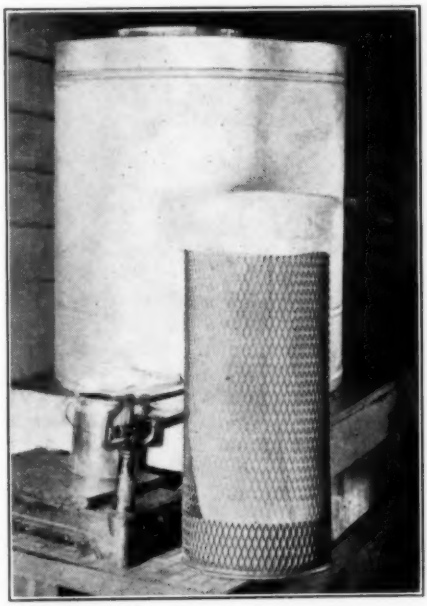
Solving Honey Processing Problem

Our next problem was to strain and bottle honey without foam. We put a heavy galvanized wire screen (window screen will do) around the outside and over the bottom of the extractor reel, to screen out by centrifugal force the coarse particles of wax which remain inside the extractor, as it is impossible to strain cold honey. Otherwise the honey passes from the extractor into the warming unit by gravity.

The warming unit is water-jacketed and heated by steam from the boiler, the honey passing in a small stream over baffles, as described some time ago in this magazine. When the honey reaches a temperature of 145° F., the honey is pumped through the fine screens into the settling tank. This was where we met trouble a plenty, as the small amount of melted wax would clog the muslin strainer on account of the heft of the honey in the bag. We experimented with many devices but finally found one that would work.

From the stationer's store we procured a cut steel waste basket (with large perforations as shown in the photo) about three feet tall and about one foot in diameter and bell shaped at the top. We had a new gasoline storage tank to which I soldered a honey gate, cut a hole in the top about fourteen inches in diameter, soldered a one-inch collar in the hole, letting it extend about an inch above the top of the tank.

Our strainers are made from muslin. In fact, we sometimes use the inner muslin sacks from sugar bags as material for our strainers which we make slightly larger than the basket and fold over and around the top to prevent slipping. The basket with the strainer hangs loosely and is suspended inside the tank, the flare of the top holding it securely in place about two inches from the bottom of the tank to prevent fouling the honey gate. The idea



Eldred's metal support for straining cloths. This cylindrical affair is suspended inside the honey tank, extending down to a point about two inches above the bottom.

of all this is to allow the honey to filter slowly through the muslin screen without pressure. A discarded milk strainer with the screen cut out serves as a funnel.

We found this device practical and entirely suited to our needs. When the honey cools, we bottle from the honey gate without air bubbles or foam and the honey is as clear as honey can be without filtering.

Winter Protection

Another of our problems was wintering on the summer stands. As our cellar was too warm for wintering bees, I first built a snow fence from waste lumber. This worked nicely, laying a huge bank of snow over the hives and protecting them from the low temperatures we have here in Illinois. The fence was saw-tooth with pick-

(Continued on page 374.)

XUM

What About Comb Honey?

ROY RABBITT

A Brief Review of Comb Honey Trends in Idaho and Adjoining States Since 1910

[The writer of this article has been for years an extensive producer of both comb and extracted honey. Mr. Rabbit's large and conveniently arranged, electrically lighted building, with its two stories and basement (Gleanings in Bee Culture, page 147, March, 1922) has been throughout the years a silent proof of the confidence of the owner in beekeeping as a commercial enterprise. That Mr. Rabbit has had a wonderful opportunity to judge between comb and extracted honey production, is not surprising.—Editor.]

The article in the January issue, by Mr. Harold J. Clay on the trends of honey production, both past and present, was read with a great deal of interest. Of special interest were his remarks on the disappearance of comb honey; his reasons why, and his appeal for the return of its production, at least to some extent. The editorial on the same subject, with quotations from Fred W. Muth, also took my mind back to better days for the production of comb honey. With some temerity I am going to take issue with these remarks by men of much wider experience than myself. These remarks are made entirely from the viewpoint of the western carlot producer of comb honey, and will be an endeavor to show why comb honey is fast disappearing in the West.

Mr. Clay makes the point that the production of comb honey should never be attempted in localities where a good product can not result. There is no argument here, but it does not follow, that this always solves the problem of quality. The past season with us, is an example of what I mean. Early June looked favorable for good comb honey production, so we placed comb supers on a portion of our colonies. The flow did not materialize and we were forced to pull off part of the supers, and use extracting supers instead. Then we moved 400 colonies to where there was a good flow of white honey, a distance of 200 miles. The brood nests were crowded with a light amber honey. The bees moved part of this to the sections and mixed it with the white. Then, when all looked nice we had a frost nearly three weeks ahead of normal. We pulled off all finished and nearly finished supers, and moved back to where we were getting a fair flow from third cutting alfalfa, which occurs on an average of once every five years. We got a fair finish on the remaining sections. This honey being light amber again, it is easy to guess what this comb honey looked like. Neither does it take an expert accountant to tell the color of ink used in the final figures. However, as they say of California's weather, "This was an unusual season for this portion of the Snake River Valley, and conditions are usually favorable for the production of comb honey."

A typical Idaho apiary where queens were reared.

Some Changes in 25 Years

Going back over a period of twenty-five years, I shall tell the changes that have taken place in production here in Idaho. Friends in Montana, Wyoming, Colorado, Utah, and Nevada report similar changes. When I came to this portion of Idaho in 1910, the irrigated area in southwestern Idaho and eastern Oregon was about half what it is today and there

Comb honey apiary. The man is the late P. R. Randall, of Nampa, Idaho.

were probably not one-third as many colonies of bees as there are today. What is usually known as the Twin Falls District, extending from Burley on the east to Bliss on the west, was virtually undeveloped so far as honey production was concerned. What is known as the upper Snake River Valley, reaching from Pocatello on the south nearly to Yellowstone Park, has probably made about the same proportional change in area and number of colonies as this part of the state.

The Decline in Comb Honey Production

In 1910, the production of this district was probably about fifteen to eighteen cars of honey, sixty per cent of which was comb. Production gradually increased in about the same proportion until 1918. Then the high price of extracted lured away many from comb and, with very few exceptions, these producers never returned to the production of comb. Those who remained, however, increased their production, both by increased number of colonies and better methods until 1928. This year marked the peak of comb honey production in this district. From Vale, Oregon, to Twin Falls, Idaho, a distance of about 200 miles, most of which is sage brush desert, there was a crop of over 35,000 cases of the finest comb honey.

Now, let us see what happened when we went to market. Over 30,000 cases of this was turned over to the Mountain States Association to handle. This was their second year of operation, and their first with comb honey. The first 8000 or 10,000 cases were moved at a price that brought a profit to the producer. The next ten or twelve thousand were sold so he at least broke even. The balance went at lower and lower prices with the last three or four thousand cases hardly covering handling costs. Remember this honey was of a quality that scarcely showed any granulation over a year after it was removed from the hives, notwithstanding the prevailing idea that western honey granulates quickly. This same year the extracted producers, using the same marketing agency, realized nearly 7 cents for extracted. From that time to the present the production of comb has decreased, not only as a whole, but in proportion to the total crop of the district. The past season the total output was less than 4000 cases.

Mr. Clay gives, as one of his conclusions why comb production has decreased, that it requires more skill than extracted production. In this I certainly agree with him. It not only requires more skill but it takes years of experience to acquire this skill. This being the case, where is the commercial producer going to hire that kind of man at wages he can pay with the present price of comb honey? The thing that I hate to admit to myself, though cold figures prove it, is, that after enough years of experience so that I can produce a fair crop of comb honey, both quantity and quality, that I can produce a considerably larger crop of extracted with the same amount of labor. Furthermore, I can teach some strapping youngster, in two or three seasons, or maybe less, so that he can do about as well. The reason I hate to admit this is because I happen to be one who gets considerable enjoyment from coaxing strong colonies into producing nice comb honey against their natural inclination to get out on a limb of the old apple tree, even though there are others who can do this better than I.

XUM

However, in the final analysis, no matter what our feelings or sentiments may be, we have to come down to earth and figure how to get enough to eat and how to keep gas in the old flivver. Beginning with 1929, as we all know, the price of honey dropped until about 1933. Since then there has been a rising tendency until the present year when it seems to be about stabilized. For one, I expect to see it stay about where it is now. With a large crop the country over, it will probably drop for that year.

Recent Price Fluctuations

Now, let us look into what the western comb honey producer has encountered since 1925. At that time we were getting an average price, including all grades, of about $3.25 a case for unwrapped comb. This held until 1928 and started off that year at about that figure. In 1929, the price dropped below $3.00. In 1930, it was close to $2.50. In 1931, it was only a little above $2.00. In 1932 and 1933, it was down to about $1.60. In 1934, it reached about $1.90, and in 1935 it climbed back to $2.25. This makes an average price, over the seven years, of about $2.10 per case. During the same period of time the lowest price on extracted was 3¾ cents, and an average of 4½ cents with the last two years, a price of about 5½ cents.

For purposes of comparison we will take average prices over the seven-year period, and make some rough cost sheets. In what is called a good year we can get an average of about four cases of comb honey per colony. In the same years we will run about 150 pounds of extracted. These figures seem to check with other producers throughout the district. At 4½ cents per pound, 150 pounds is $6.75. Our average price for containers during this period was ½ cent per pound. This leaves a net of $6.00 per colony. Four cases of comb at $2.10 is $8.40. The average cost for sections, and cases is 50 cents per case. Add to this, 10 cents per case for labor, to clean supers, put up sections, paraffin, etc. This makes a total cost of $2.40. This leaves a net of $6.00. Exactly the same as for extracted. However, this does not take into account the difference in labor cost in preparing comb and extracted ready for market, nor the difference in labor cost in yard work, which would show a further offset against the comb honey. We must also remember there are many poor years, when the extracted producer has a still greater advantage. I would like to ask where we would have been had we continued to produce twenty or twenty-five thousand cases of comb honey.

Honey Market Trends

With a few words on the subject of markets I will close these rambling remarks. A quarter century ago nearly every large city in this country had one or more carlot buyers of honey, both comb and extracted. By this, I mean buyers who handled 90 per cent of the honey that went into those markets. When we had a car of comb honey ready for market it went to some of these buyers. They, in turn, disposed of it through the regular channels of distribution. Of this class of buyer there are two or three left on the Pacific coast, and they usually buy a truck load instead of a car load at a time. There is a good reason for this. They do not know when some producer will roll in with a truckload and unload to some chain store buyer for what he can get after they have let him stay in town long enough to find out expenses are eating him up.

In this region, west of the Rockies, we have three outlets for comb honey. There is the local consumption in the large cities of the Pacific coast, the export market to Great Britain by California buyers, and the market east of the mountains. The regular coast market consumes a good deal of comb honey, drawn from Utah, Idaho, and Nevada, with some produced in California, Oregon, and Washington. The export market is limited in demand, and the last few years the exporters say that if they asked a price that would allow them to pay the producer a fair price, they got no business. When we try to ship East the first expense we have is a freight rate of fifty to seventy-five cents per case before we can compete with our fellow producer of that region who can probably get to market by truck for ten cents a case.

There are many other angles in the marketing of comb honey that I could mention that I think have contributed to its gradual elimination. I will call attention to just one before closing. This is the change that has taken place in the retail grocery store in the last few years.

It is not so many years back that most grocery stores were run by the men who owned them. Each took pride in the quality of his goods, and the service he ren-

(Continued on page 378.)

Simplified Queen Introduction

EMIL F. FERNES

Smoke Method Eliminates Unnecessary Labor and Equipment and Saves Time

]Mr. Fernes is 28 years old and has been keeping bees since 1929. He is a side-line beekeeper with forty colonies, and also takes care of bees for other people. He finds beekeeping a profitable recreation. The surplus honey is largely tulip poplar in the spring and goldenrod in the fall. Mr. Fernes is especially interested in the study of bee behavior.—Editor.]

When, in 1929, I purchased sixteen queens from a southern breeder only to lose seventy-five per cent of them in the process of introducing according to the directions on the mailing cages, I decided that something must be wrong with the method. From then on I began to read everything I could get my hands on pertaining to queen introduction; for I had learned from my unfortunate experience that a mastery of this procedure would be essential to the successful operation of an apiary, especially, as in my case, if that apiary happened to be located at a distant out-yard.

To return to an out-yard several weeks after having introduced queens and find a number of colonies practically broodless, and with either queen cells or virgins present, is an incident not uncommon, I suspect, in the life of the average beekeeper. If this should take place immediately before a honey flow, the effect upon the honey crop will be obvious. Thousands of workers that should have been present for the honey flow have been lost for lack of a laying queen, and the honey crop will suffer in proportion. From this it can be seen that effective queen introduction has a very definite dollars and cents value to the beekeeper.

Various Methods Tried

I commenced, therefore, to try the various methods of queen introduction as outlined in the bee books and, from time to time, in the bee journals. Some of these, I discovered, were not one hundred per cent successful; some were. The former I discarded; of the latter I rejected those which required too much manipulation, too many visits to the hive, or special equipment, such as wire screens, push-in cages, etc. In this manner I finally arrived at a method which, though it is not a new one, I consider to be ideal. It is the smoke method, as somewhat modified by myself.

Emil F. Fernes and his niece in his apiary.

This method contains what to my mind are the two cardinal objectives to be sought in queen introduction: namely, one hundred per cent acceptance of queens, and simplicity of operation. Regarding the first, I have never had a failure in introduction since I began to use this method two years ago; as to the second, the beekeeper need have no other equipment than his smoker and need make no more than one visit to the hive.

Smoke Method of Introduction

The procedure is as follows: Take the new queen and go to the hive to be requeened. Open the hive with as little disturbance as possible. This is important, as any undue jarring or the use to too much smoke will excite the bees and start

XUM

them running over the combs, thereby making it difficult to locate and remove the old queen. The old queen having been removed and her head pinched off, the frames are placed back in position and the inner cover put on directly over the brood chamber. A cleat is deposited in the entrance, leaving about a four-inch opening, and the smoker is started going until it throws large clouds of smoke. Any type of fuel that will give plenty of smoke may be used, provided, of course, that it is not a chemical or tobacco fuel.

Smoke is now blown into the small entrance of the hive, and is continued until the bees are roaring. Don't be afraid to use lots of smoke for fear of injuring the bees, as it is surprising how much good, clean smoke they can stand without serious consequences. After the bees begin to roar, take the new queen from her cage (if she happens to be in one) and, sliding the cover back on the hive, drop her down between the frames, following her with a few more puffs from the smoker. The cover is then immediately slipped back into place. Make sure she is dropped down between the frames, because if she is released on the top bars she may take fright at the confusion and the smoke and fly away before the beekeeper can replace the top. If the hive had supers on it, the queen excluder is quickly put over the brood chamber and the supers are replaced, thoroughly smoking each one as it is put on. When the bees have quieted down the entrance cleat can be removed, and the job is completed. Very simple, isn't it? And just that effective.

With this method used, I have found queens, introduced directly into the hive from a nucleus, laying within one hour after introduction. However, queens that have been confined in a mailing cage for any length of time may not begin to lay for two or three days.

Yes, I have introduced queens by this method under every conceivable condition; during the honey flow, before it, and after it; in fair weather and foul; in spring, summer and fall; to gentle bees and to vicious bees; and I have yet to have a failure. Here is a case in point.

Works Even on Vicious Colonies

A friend of mine, who possessed three of the most vicious hives of bees I have ever come across, had tried by all the ordinary methods to requeen them, but without success. Finally he came to me and requested that I attempt it. As at that time I had just begun to use the smoke method, and being delighted at the results it had shown, I took three queens of a gentle strain and went to the hives in question. Besides the naturally nasty disposition of the bees, I found these other conditions obtaining: the hives were located in a leafy wood which allowed practically no sunlight to penetrate; there was no honey flow on and not a drop of nectar was coming into the hives; the bees had been queenless just long enough to have no brood and laying workers had already developed. Any beekeeper will readily admit that none of these circumstances are at all propitious to successful queen introduction. Nothing daunted, however, I used the smoke method as outlined; and when the hives were opened three days later we found the queens crawling over the combs, accepted and laying. I could, of course, relate other instances, but this one will suffice.

Why is this method efficacious? The theory that bees in a state of confusion recognize no enemy, and, consequently, will accept a strange queen, is probably correct. I have been informed that in some European countries a method of queen introduction is used which has the same theory but a different practice. There, after the old queen has been removed, the bees are shaken in front of a new hive, placed on the old stand, the old hive having been moved a short distance to one side. As the bees, confused by the shaking, begin to enter the new hive, the new queen is dropped among them and she marches in, unnoticed and unharmed. This method is said never to fail.

The smoke method, in my opinion, is much to be preferred to this one; because it obtains the same effect, that of bewildering the bees, with considerably less effort and equipment. In these difficult days, beekeepers should seize on every trick of the trade that will eliminate unnecessary labor or equipment in the apiary.

Fox Chase, Pennsylvania.

[The smoke method was first used by the veteran queen breeder, Henry Alley, and then greatly improved by Arthur C. Miller. His plan differed from the one given in that he ran the new queen into the entrance after smoking the colony and then followed her up with more smoke. The entrance was then closed with grass. The bees will push out the grass.—Editor.]

The Confectionery Industry

JOHN B. AITCHISON

A Great Potential Market for Honey in Candy Making

Some months ago I had occasion to watch two experienced candy makers work out a product that they called "honey caramels." The first thing they did was to make up a formula, which was as follows: 15 pounds sugar, 10 pounds glucose, 10 pounds honey, 10 pounds condensed milk, 5 pounds cocoanut fat.

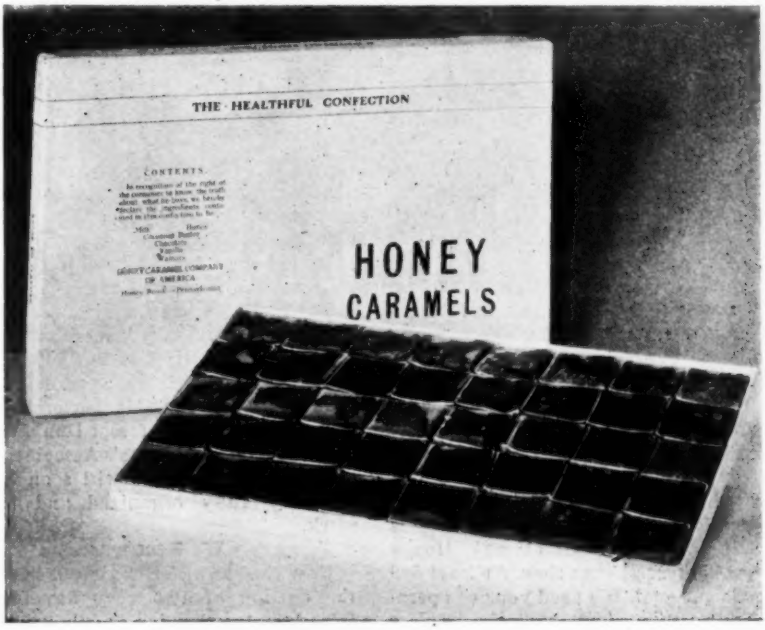
This made a very chewy piece and contained just enough honey to give a distinctive and pleasing flavor. When I called the attention of the makers, however, to the fact that the confection did not contain enough honey to justify the use of the name "honey caramel," they expostulated and said that the use of more honey would spoil the caramel. They said it would give a weak body, which would not stand up; that it would be tough and lacking in shortness; that it would be sticky, and couldn't be run through cutting and wrapping machines; and that it would be over-caramelized or burned.

These, in truth, are the common objections to the use of honey as the principal sweetening agent in caramel manufacture. However, these objections have recently been overcome in commercial manufacturing. After two years of intensive research devoted solely to the use of honey in caramels, a 100 per cent honey-sweetened caramel has been developed which has met with immediate commercial success—a success attributable largely to the unique values which honey lends to the confection.

Honey Lengthens Life of Caramel

On the technical side, the bane of all caramel makers is grain. The shelf life of the sugar-sweetened caramel is limited by the time it will take for the sucrose to crystallize and spoil the chewy consistency of the piece. A properly made honey caramel will never grain, and its shelf life is practically unlimited.

The growing popularity and desirability of honey to the consuming public is demonstrated forcibly by the fact that a



Honey caramels packed in an attractive box.

certain brand of honey caramel achieved national distribution in less than three months following its introduction to the confectionery trade, and that the unexpected volume of sales necessitated complete plant revision and the introduction of high-speed cutting and wrapping machines equipped to produce five thousand pounds daily.

Physicians and dietitians have long stressed the nutritional superiority of honey over other sugars; yet the confectionery industry has been loath to accept honey as anything more than a flavoring ingredient in nougat. Experiments now in process indicate, however, that honey can be utilized in candy making in proportion to its dietetic importance. In fact, from the technical angle, there seems to be every indication that continued research will open to the honey producer a large market in the confectionery trades.

New Honey Confections Possible

A number of years ago the writer had the pleasure of seeing an old wood cut depicting the making of honey candy in medieval times. Here the art was developed from the industry, because honey was the most available form of sweetening. Today, there is no reason why the industry can not be resurrected from the art. A hand-rolled cream made with honey is now an actuality. Hard candy and clear toys made with honey would be an interesting new confection, as would honey jellies, gum drops, marshmallows, and many other pieces which the skill of the candymaker can originate. Any of these, made and marketed at first in the atmosphere of the particular art from which the inspiration sprang, might, in the course of time, develop into an industry both pleasurable and profitable; and one which, at the same time, would make a significant contribution toward higher nutritional standards for the confectionery industry.

Honey Brook, Pa.

American Honey Institute Notes

Convention Notes

Have you read all that is being said about the forthcoming convention of American Honey Producers' League and the Institute to be held in San Antonio, Texas, just before Thanksgiving? Surely these announcements are arousing a great deal of interest in this 1936 meeting. Because of the encouraging reports about the prospective honey crop and the unusual program being planned, the indications are that we will have a large attendance of beekeepers from all over the United States.

Why not let the convention be the occasion for that vacation you have been promising yourself for, lo, these many years. Begin to plan now so that when the time comes you will be all set to pack your "glad rags" and be off for a gala time. Added attractions will be the Texas Centennial and a possible trip to old Mexico.

And while on this subject of convention, don't forget that the Institute is sponsoring its Third National Honey Cookery Contest at that time. At least 500 entries is our goal. We need your co-operation. How many people will the readers of Gleanings interest in entering this contest? Send in your request now for rules and list of prizes to promote the contest in your community.

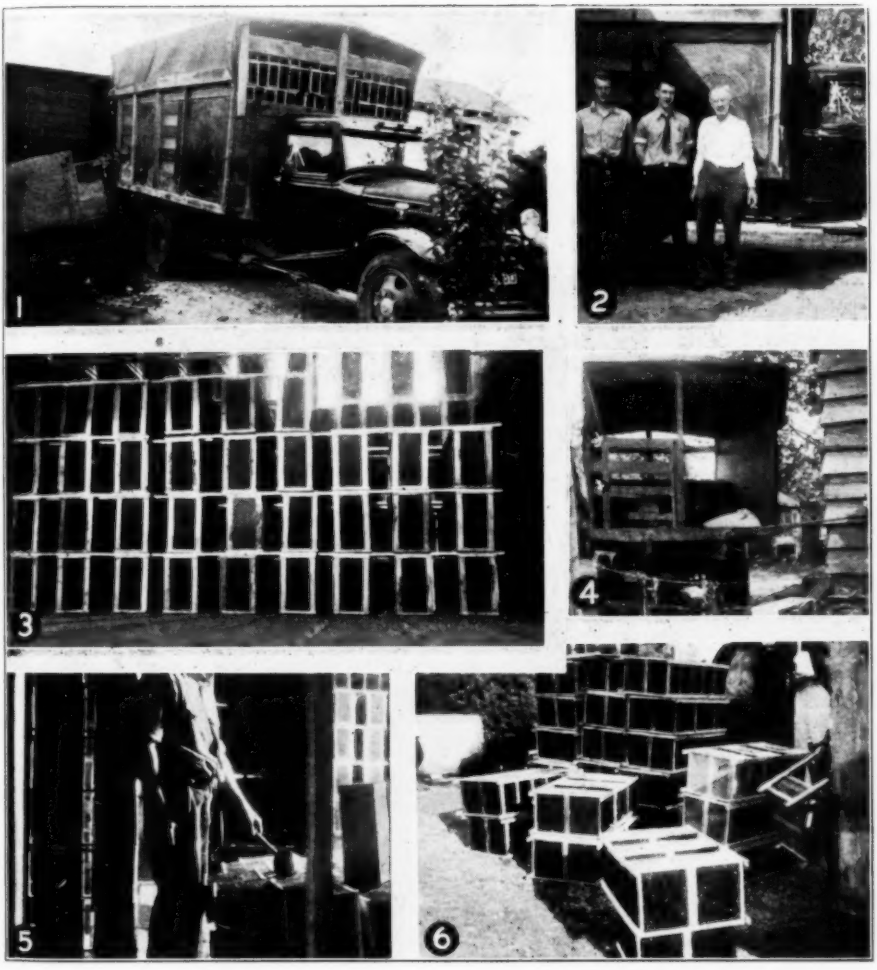
Ohio Woman Becomes Interested in Auxiliary

Seldom is one anxious to assume added duties to the already characteristic rush of modern life but such was the case when Mrs. C. A. Walter, of Canton, Ohio, wrote to us for information about organizing an auxiliary in her state. She is interested in promoting the consumption of honey, uses it extensively in her own home, her baby is honey fed, and she if the wife of an Institute member.

The Institute has a very definite service available to auxiliary leaders but so many times the difficulty lies in finding leaders to use the service. We were delighted to send Mrs. Walter this material and to refer her offer to Professor Dunham of the Ohio State Beekeepers' Association. We hope Ohio beekeepers will soon have an auxiliary fully organized and hard at work.

We Recommend

Now that strawberry time is here again, the uniting of two very flavorful food friends—strawberries and honey ala any way you can think of.



MOVING 500 PACKAGES BY TRUCK FROM THE SOUTH TO THE NORTH.

(See Editorial, page 353.)

Fig. 1.—Truck loaded with 500 packages of bees at Montgomery, Ala., ready to start for the apiaries of Ira Bartlett, East Jordan, Mich. Note that the ventilation is wholly from the front to the rear and not from the sides. See Fig. 4. The forced draft during travel is enough to give good ventilation. Fig. 2—Norman Bartlett and Walter Ellis at the left are the drivers. J. M. Cutts, from whom half the bees are obtained, shown at right. Fig. 3—Interior of truck half loaded. Wooden strips nailed to the cages hold the cages apart. The sides of heavy strawboard are slidable to provide extra ventilation if needed. Fig. 4—Interior of truck with half of the first row of packages placed at the front. Fig. 5—The cages contain no syrup cans. Dipperfuls of syrup are poured through the cages just before loading, until the bees are gorged. The syrup the bees can carry will last two or three days. Fig.6—Cages of bees ready to load from M. C. Berry's place ready to load in the truck. The start is always made after dark. By morning the bees will be where climate is cooler. Messrs. Cutts and Berry supplied the bees. Experience seems to show that bees gorged with syrup just before starting travel in a truck better than with cans of syrup that add to the room in the cage and to the entire weight of the load.

The time may come perhaps, when bees gorged with thin syrup with no additional supply in a tin can, can be sent by express as well as by truck. The matter should be tested out on a small scale before sending general shipments that way. It would save the expense and the weight of the filled cans and at the same time provide extra room in the cage.

XUM

Whence Come Eggs in Cups?

ALLEN LATHAM

It Is Possible Queens May Place Eggs in Queen Cell Cups

Some ideas lie on the human brain like candy on the tongue, yielding a pleasant sensation, so pleasant that one is loath to let them leave the brain. You may use all sorts of arguments and prove conclusively to a farmer that the moon can not influence the weather by simply coming into the first quarter, but that farmer will keep on believing what he likes to believe. I have a brother who fondly believes that the first hard frost in the fall of the year will come on the full of the moon—no arguments can move him.

So it is with bees. Many a beekeeper has his pet ideas about bees, and though a better informed man may tell him what the facts are, he will not accept the facts, but will go on believing what he gets pleasure in believing. He takes much pleasure in telling others these pseudo facts about bees. In my fifty-one years with the bees, I have run up against scores of such beekeepers, and I have wasted considerable time trying to show them the truth, but with no avail.

It is a peculiar characteristic of the average human mind that it clings tenaciously to folklore. Probably this is due to the fact that the great part of human existence was without books or writings of any kind. Knowledge had to be passed on by word of mouth, and so it came about that much credence was given the statements of the aged. Most such statements were taken in their entirety, the listener not questioning at all the truth of the information thus passed down. Any well-informed beekeeper knows well that this is true of statements regarding bees. How many people there still are who think they must have a table, a sheet, some substance with which to rub the inside of the hive, and possibly a bell or pan to pound when they are about to hive a swarm of bees!

Now many of these old-time ideas are laughed at by most of you who are reading what I am now writing. You know better, but what about some of your own pet ideas?

I have for years tried to persuade the readers of the beekeeping magazines that bees do not implant eggs in queen cells, that if bees ever move eggs except to throw them from the hive it is a rare phenomenon, if it ever occurs. But what good has it done, and more than that you will come back on me and say that when I do this I am simply defending one of my own pet ideas.

Still, I have a more scientific mind than the average run of people. I have always wanted to know the why of things. I at once throw up a pet idea as soon as I see evidence that it is false, I mean fairly conclusive evidence. The bees have more than once made me change my mind, and they have a great many times made me throw up what I had learned by reading. For they told me that what I had read was not true. Dr. Miller once said, "Take it to the bees." I have always, long before I knew Dr. Miller, practiced that dogma.

There have appeared many times in the past several years seemingly reliable instances of queen cells in places shut off from the queen. It will make this article too long if I discuss these in full. I shall merely make one or two general statements. In the great majority of cases where queen cells have been found in supers over excluders such queen cells have held drone larvae, and the larvae came from eggs laid by worker bees. In many instances the queen, unknown to the beekeeper, has had access to the super, or some strange queen has had such access, for if there ever was a cell in a super over a queen-excluder which had a larva of the female sex we may rest assured that a queen placed an egg in that cell.

Now no one has ever seen a queen lay in a queen cell, and no one has ever seen a worker bee place with her mouth an egg in such a place. We must rest all our arguments upon analogy and circumstantial evidence. Personally, I have great faith in circumstantial evidence, and I also find analogy a wonderful teacher. Nature is very fixed in her ways, and the habits of insects run very true to form. Since insects do not, so far as we know, have rea-

soning power they must obey certain fixed impulses. The habits of insects are of very long standing, and we may rest assured that any individual insect will not depart from the fixed path.

It is true that different strains of bees and different races of bees differ somewhat in their habits, but in most essential details they are identical in their habits.

How, then, can a worker bee have the intelligence to pick up an egg and fasten it into a queen cell? Such an act is way beyond her power of conception, and she could do it only by accident.

My own observations of worker bees and free eggs, is that they pick such up and carry them about. But they will pick up bits of paper, sawdust, any sort of litter, in the same manner, and carry such about. Worker bees will, I believe, eat eggs, but sometimes they fly with them from the hive. I refer to eggs dropped by the queen when she has no cells in which to put them and she is forced to rid herself of them.

Every beekeeper knows that when a colony is deprived of a queen, the bees will soon start constructing queen cells about young grub worker cells. Why, if they can move eggs and fasten them in queen-cups, do they not take eggs from worker cells in this case and place them in the queen-cups that are almost always present? This has never happened so far as I know. On the other hand, when bees prepare to swarm and need young queens they never build queen cells about worker cells, but invariably rear the young queens in regular queen cells.

Then the question arises: What would be the manner of fastening an egg in a cell when the worker bee does it? One of the best known writers on bees suggests that she might lay it on a tiny drop of royal jelly. Yes, she undoubtedly could do that if she had to do so. Unfortunately, the eggs so often found in queen cups during the swarming season are placed on end identically the same as they are placed in worker cells.

From the spring of 1902 to into 1906 I kept an observation hive of the one-frame type. Early in May, 1903, I was watching that little colony one day when I saw the queen crawl up to one of the queen cups on the comb and push her head into it. It was the disappointment of my life when she failed to turn around and put in her abdomen. I kept watch as long as I could, but did not see her near that cup again. Three days later the cup showed by the activity of the nurse bees that it contained a larva. Later on, the colony having swarmed on May 11, a queen emerged from that cell.

Now it seems to me that the queen by poking her head into the queen-cup showed strong evidence that she would lay in it had she not already done so. I feel very sure that she did not lay in it before my eyes for the simple reason that she found that she had already laid an egg in that cup.

Now, many hold the foolish idea that a queen because of animosity for other queens, would refrain from laying an egg in a queen-cup, thereby possibly sealing her death warrant. A very silly notion, I say. A queen does not recognize any animosity toward one of her kind until that one is nearly mature. Queens will not molest unsealed queen cells so far as I have observed. They will rarely tear a hole in a cell that is sealed unless it is reaching maturity. I have many times reared a batch of cells with a queen free without my knowledge, but almost always have been able to rescue some of them, though they had reached maturity with that queen free to tear holes in them.

Why should a queen lay in a worker cell? That egg might produce a queen. There is no difference between an egg in a queen cup and one in a worker cell. All female eggs are prospective queens, and all female larvae are prospective queens until nearly three days of age. A worker grub does not exist until it is about three days of age, then its royal nature ceases by acts on the part of the nurse bees which change that grub into a worker grub. It is an absolute fact that there are thousands of royalty in every beehive in the active season, but most of those young royal sprigs are destined to lose their royalty and become serfs.

I have never seen a queen place an egg in a queen-cup, but I am willing to stake my reputation as an observer that such an act is a perfectly normal procedure, and that it takes place in the majority of hives every season.

Norwichtown, Connecticut.

[We have not yet had a report from any one who has actually seen a queen lay an egg in a queen cell cup, but it seems reasonable to assume that this actually occurs.—Editor.]

XUM

From the Field of Experience

BEES ON THE ROAD

Migratory Beekeeping Looks Simple to the Inexperienced, But—

My experience in migratory beekeeping has not been large. But it was good, what there was of it—and there certainly was enough of it, such as it was. Enough for me, anyhow; and when I say it was good, I mean good experience, not good beekeeping. It did not fall to my lot to move these particular bees out to their temporary location. I was interested in the move, sort of hanging around, as an innocent bystander will, for which I suffered as an innocent bystander often does. It was I who had to get those bees home again.

I decided they would move easiest in the spring. We left home at 6:30 of a rainy morning late in March, with two trucks, two drivers, and two helpers, including myself, and reached the first bee yard at 3:30 that afternoon. The weather had cleared by that time and bees were flying some. We got them loaded soon after dark, and moved to another yard a short distance beyond, to pick up the rest of the lot. There were more bees in this second yard. They were in a sort of open grove, where there seemed always to be a tree in the place you least expected to find one. We didn't waste any time, but the darkness hindered us (as it always does when one is handling bees). Doing our best, it was 1 a. m. when we started home.

Along the road we saw a house burning down. A lucky break for us, for it had awakened a service station attendant, and from him we got a midnight lunch. At 3, we stopped and built a fire by the side of the road, rested and warmed ourselves until daybreak.

A few miles farther along we stopped for gas. The driver of the truck I was riding on had put a lighted lantern between his feet to keep them warm. The gasoline tank was under the seat. We had forgotten about the lighted lantern, and as it was now broad daylight no one noticed the lantern, until it set the gasoline on fire. I thought we ought to get the truck with its load of bees away from the station, but didn't know just how to do it, as the seat was all ablaze. The service man quickly put it out with a fire extinguisher. We went on.

Home again with the migratory bees. Bringing them back required more than 30 hours' work and doing it in one stretch did not make it any easier.

Throughout the day, whenever we stopped for any purpose we saw loose bees. We reached the home yard at 2 p. m. In unloading, I found that two bottom-boards and one cover had been wrenched apart. We placed the bees on their stands, opened the entrances, and quit for the day.

Perhaps a few things happened on this trip that would not ordinarily happen. (I have frequently moved bees without setting the truck on fire.) But except for those incidents it was a routine job. The whole distance traveled, going and coming, was less than 600 miles. Yet the working time required was more than 30 hours. And the fact that it has to be done at one stretch does not make it any easier.

A few months ago I saw a friend of mine, who keeps some bees, but has not moved them about very much, stretch his legs toward the fire, gaze absently at the January landscape outside, and orate at some length on the opportunities in migratory beekeeping. It looked simple. Three hundred miles south there was a honey flow six weeks ahead of ours. Four hundred miles north was a place where the main flow came on just as ours was tapering off. Three honey flows a year, instead of one! Yes, he made it look simple. He might almost have convinced me that it was easy if I hadn't known better.—W. H. Hull, Vienna, Va.

"DUNK" QUEEN AS WELL AS BEES

This Prevents Her from Flying. Strengthening Weak Colonies

Filling bees with sugar syrup has greater possibilities than many of us have realized. I was especially interested in the editorial "Dunking Packages in Syrup Before Installing," in May Gleanings. While I have never "dunked," I like the method of filling the bees with syrup and shaking them into the hive, the best of any I have tried. If well done I have never lost a queen by releasing and dropping her into the mass of thoroughly disorganized bees. I have lost one queen, however, by having her fly up and out before I could close the hive. Since then I cover her with syrup or honey so she will "stay put."

Adding about a pound of bees to weak colonies in the spring is one of the most profitable methods I have practiced. The queen may not be to blame for the small number of bees in the spring, so why unite two colonies and lose a good queen. No matter how good she is, she can not lay eggs faster than they can be taken care of by the bees.

The thing to do is to buy four-pound queenless packages and shake about a pound or more into each weak colony. Here is where "dunking" may again be advisable. The bees can be united if both the package bees and colony are fed with syrup. The first time I did this I had trouble with robbing because it was done on a warm day with bees flying. Wait until evening or when they are not flying. The newspaper method, of course, would be safe.—H. J. Rahmlow, Madison, Wis.

EFFECTIVE SWARM CONTROL

Destroying Queen Cells May Not Stop Swarming

Many beekeepers endeavor to prevent the issuance of swarms by cutting out queen cells. In general, such practice is futile. It is true that some strains of bees are less inclined to swarm and in some few instances swarming may be retarded, but in most cases and in case of hybrids and blacks on the rampage, it is utterly foolish to try to prevent swarming in this way.

Aside from allowing natural swarming, there is only one effective method of control after the bees once acquire the fever and that is to remove the brood—not part of it, but all of it—replacing it with foundation or drawn combs. The brood without the bees may be used to strengthen weak colonies, to build up nuclei, or may be set aside with a queen cell and a comb or two of bees to build up for winter. This method is equivalent to natural swarming where bees are hived on the old stand, except that practically all of the bees are left for honey production instead of only a part of them. Advantages are that it effectually cures the swarming impulse and avoids the loss of swarms. The beekeeper can choose his own time for operating and thus avoid the necessity for watching for swarms.

Assuming that standard equipment is used, a better method is to forestall swarming by using the Demaree plan of putting the brood (all but one frame) in the top story above an excluder and fill-

ing in below with drawn combs—not foundation. This should be done before the brood chamber becomes congested and before queen cells are started. The process may be repeated in case of a protracted honey flow or when there is further danger of swarming. If queen cells are started above they should be removed ten days after setting up.

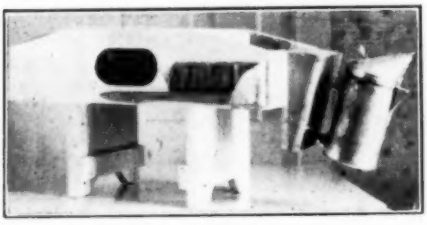
If comb honey is to be produced, the lower chamber with its unsealed brood is removed about ten days after setting up and the upper chamber with the sealed brood is put down with the queen, being sure that all queen cells are destroyed. Two or more section supers may then be added. Later, if bees show an inclination to swarm, remove the brood as stated above.

By using the above methods it is possible to run outyards with little or no swarming. We have repeatedly tried the plan advocated by some writers, of using a double brood chamber. It has not proved satisfactory as a means of swarm control.—E. S. Miller, Valparaiso, Indiana.

ON A HIVE SEAT

A Very Handy and Useful Piece of Apiary Equipment

One piece of equipment which the small beekeeper will find very helpful is a hive seat of some kind. The type shown has certain features which may prove of interest. It is the conventional style offered



Comfortable and convenient.

by the supply houses for a nominal price, but changed slightly with a view to increasing its usefulness.

Incidentally, this one is a home-made affair. The factory made seats are undoubtedly better, but if you feel you can't afford one and yet would like one, it can be made quite easily of odd pieces of boards and dry goods boxes that anyone may have in his garage or cellar. Be sure to use soft wood. Hard woods are too heavy.

One of the two end compartments is left open. It forms a very handy box to catch those pieces of burr and brace combs which form a surprising amount of wax if collected and saved throughout the summer. A metal lining fitted in this makes it even better. This part of the seat is made of ⅜-inch material and furnishes a very convenient edge on which to hang the smoker when moving from one hive, or group, to another. If your smoker doesn't have a small, flat hook on the back of the bellows, put one on. You will find it even handier for hanging the smoker on the rabbeted end of the hive as you work, where it will be right at hand when needed.

The opposite end is covered by a piece of galvanized iron, hinged on a small rod at the back. This particular rod was made from the end of one taken from the center of a roll of composition roofing. Any heavy wire would do. It was cut the correct length to pass through two holes bored in the sides of the seat. The metal sheet for the cover was cut to allow for a rolled flange at the back. A small lock slot was made in the front edge and the cover installed by pushing the rod through the holes in the hive seat and the rolled edge at its back. Heading over the rod on small washers holds it firmly in place. A curtain button such as is used for auto curtains should be fastened to the outer edge to hold the cover shut. This makes a practically weather proof box in which to carry your queen cages and clipping scissors, hive tool, tobacco tin for matches, etc. We keep smoker fuel in the center. The large openings make it easily accessible.—K. A. Gallant, Meridian, New York.

265 STINGS AT ONCE

It Takes More Than Bee Stings to Get Mr. Perrin Down

The article by Mr. Haydak, of St. Paul, Minn., in the May issue of this journal, recalled an experience I had four years ago. I am a jeweler and have kept bees for fourteen years as a hobby and recreation from the bench work, and have operated up to 265 stands at one time.

I have become so immune that I rarely put on a veil when hiving a swarm. So when a very large swarm clustered about

twenty feet from the ground in a cottonwood tree back of the store I did not hesitate to climb up to cut it down. The day was hot so I had my shirt collar turned in and the first two buttons open, also my sleeves were rolled to the elbows. When I got up in the tree as far as I could I found I could barely reach the end of the branch the bees were clustered on and they were directly above my head.

I took out my knife and started to pull the branch down where I could cut it, above the cluster. But as the swarm was heavy it had stretched the limb almost to the breaking point, for I had hardly started to cut the limb when it broke and let the bees down directly on my head. From the way they proceeded to work on me they must have been out for several days and were empty of nectar. In some way I reached the ground. According to one observer I plainly showed that man was related to the monkey. I brushed what bees I could from my face and head. I had kept my eyes shut so as to avoid stings directly in them.

I was led into the store and my daughter brushed off the remaining bees with a towel and combed them out of my hair. For about three or four minutes I was crazy with pain and felt as if I was afire from head to feet. But the pain soon subsided. My daughter took 165 stings from my face, head and the back of my neck. I had brushed off many of the stings and I must have had at least 100 more on my body and arms. I went home thinking that I would surely be sick and thought that I should want hot applications. But to my surprise I could not feel the effects of the stings inside of half an hour, and there was not the least bit of swelling. So, of course, I did not use any remedies. Except for a slight soreness on the back of my neck I did not feel any ill effects the next day. I do not care, however, to try another experiment to see just how many stings I would have to receive to make me sick.

When I first started to handle bees I would experience a slight swelling from a few stings, but for years I have never been bothered by this swelling. There is pain at all times for about ten to fifteen seconds after receiving a sting.—Harold I. Perrin, Sargent, Nebraska.

Uvalde, Texas, Celebrates

The most unique and appropriate of the Texas Centennial celebrations was held at Uvalde, May 7 and 8. The keynote of the celebration was a tribute to the guajillo honey for which Uvalde is famous. The Honey Festival attracted all of the beekeepers from the guajillo district and adjacent localities. Tons of water white famous honey was on display in the various business houses and public buildings of the town. It was estimated that over ten thousand attended the celebration. A parade of great originality of floats and decorations some two miles in length marked the high spot of the festival. A program of pageants, rodeos, and other amusements attracted a large crowd.

In keeping with many of the other celebrations mail sent from Uvalde on May 7 could be sent in special envelopes bearing a picture of the home of Vice-President Garner, the most prominent citizen of Uvalde. The stamps cancelled at Uvalde on that day bore the likeness of the honeybee, thus making an attractive and excellent souvenir of the festival.

The beekeepers of the district were well supported by other industries. The wool and mohair men had wonderful exhibits that added much to the excellence of the meeting. Headquarters for the beekeepers was the office of Walter Reed, the veteran leader in bee supplies in the Uvalde district. Among the many large displays of honey those of O. Saunders, W. D. Bunting, W. M. Huegele, J. W. Roberts, E. G. Schudde, J. Patterson, R. P. Rowland, A. P. Molloy, and J. D. Sutherland were noted for their size and excellence. O. Saunders and I. F. Aten led in the display of live bees in observation hives.

The floats in the parade of definite interest to the beekeepers were those of the Queen Bee of the Honey Festival, one of of Uvalde's fairest daughters. Her float was covered with white, yellow and green, representing honey and the spring flowers. Following were floats carrying the Queen's attendants, each float representing one of the major honey plants of Uvalde district. It is needless to say that all of the business houses which represented their wares play up to the honey game. The most unusual among the floats was one representing the Uvalde paper, the Leader-News. This represented a woodland scene, emphasizing the guajillo, catsclaw, and retama shrubs. From this ground work arose a huge honey can with the well known Uvalde honey label upon it. From its top two future queens of the

XUM

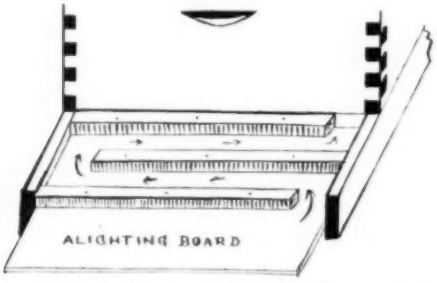
Honey Festival distributed flowers to the spectators.

The local beekeepers are unanimous in their support of this Honey Festival and formed a local organization to secure its annual observance, also to secure the spring meeting of the Texas Beekeepers' Association at the same time.—H. B. Parks, Secretary-Treasurer, Texas Beekeepers' Association, San Antonio, Texas.

ROBBER-PROOF ENTRANCE GUARD

This Easily Made Gadget Fools the Robber Bees

Next time one of your colonies is being robbed, try the following little gadget, and you will be astounded at the ease with which it stops robbing. The gadget consists of a bit of thin three-ply, 14½"x5", on which three ½-inch square strips of wood have been nailed parallel to one another, ½ inch apart, in the manner as shown in the illustration. Another piece



The tunnel seems to confuse the robbing bees. (Cover of the tunnel not shown.)

of three-ply, 2½"x4½", is nailed over these strips, thus forming a tunnel. It is put over the entrance of the colony that is being robbed in the same way as a drone trap. The entrance block should first be removed, and care should be taken that there is no other opening where the bees can gain access to the hive except through the tunnel. Whether the robber bees are scared to go through this long tunnel or whether it gives the robbed colony a chance to pull themselves together and withstand the onslaughts of the robbers, I do not know, but one thing is sure, "all's quiet on the western front" in a very short time. Since there is some danger of the colony getting too little ventilation through the tunnels, the gadget should be removed as soon as there are no more signs of robbing, and the entrance block substituted, giving the smallest opening. This gadget is also very handy for putting in front of the entrances of colonies that have been moved. The bees immediately notice that a change has taken place and take stock of their new surroundings ere leaving for the field.—G. P. Beyleveld, Pretoria, South Africa.

BONANZA HYBRID QUEENS

Who Will be the First to Undertake This Seemingly Worthwhile Project?

In the January Gleanings Mr. C. M. Isaacson brings up a matter in which there are great possibilities, both with bees and other forms of life, namely, the utilization of hybrid vigor in production stock. If Mr. Isaacson could maintain pure lines of two strains which gave him his wonderful hyrid colony and then obtain queens of one mated with drones of the other to head producing colonies, his fortune would be as good as made. The difficulties in the way of doing this, for one ordinarily situated, are not hard to see. Nevertheless, there are great possibilites in it when the matter is taken up by some one able to fulfill the necessary conditions.

Due to the shuffling and recombination of characters in sexual reproduction, this excess vigor usually disappears after the first generation in bees as in other forms of life.

For instance, if in poultry you cross such distinct breeds as brown leghorn and Plymouth Rock, you may get unusually vigorous and high laying stock in the first generation, but it would be a waste of time to try to fix this added vigor by breeding from such hybrids. You must make the cross anew to get it.

In fruits and some vegetables that are easily propagated asexually, we have long been enjoying some of the results of cross-bred vigor. The fact that nearly all of the better varieties of fruit and potatoes do not come true from seed is evidence that their superiority is more or less a matter of cross-breeding. Some strawberry breeders have reported that all of their best varieties came from crosses of very ordinary sorts.

The experts of the U. S. Department of Agriculture bred what they thought was the finest rust resistant asparagus and which they named the Washington asparagus. They then brought out a first gen-

eration cross of it, called the Martha Washington, which excels the high-bred parent.

A good many years ago a man in Illinois went to considerable trouble to cross the American and Japanese varieties of chestnut. He obtained two hybrid trees producing fine large nuts of good quality and weevil-proof, like the Japanese parent. Unfortunately, he was unable to propagate them by grafting. He planted an orchard from seed of his hybrids but the seedlings reverted to more or less worthless mongrels. Those who planted seed of Burbank's Royal hybrid walnut have seen something of the same thing.

A good deal of work is being done by some of our experiment stations in isolating strains of corn which, when crossed give high yielding progeny. Enough has been accomplished to show that this is the way to obtain the highest yields.

With corn and to some extent with most plants there is a factor of local adjustment to soil, etc., which does not apply to such an extent with bees. A stock of bees which excels in one locality can reasonably be expected to make good over at least a considerable part of the country. It would be much like issuing a patent on the product to one who could supply queens giving superior hybrid workers, since, as a rule, the purchaser would be unable to propagate it successfully. Who then will be first to supply us with Bonanza hybrid producing queens?

The docility of a well-bred strain of Italians seem to be dominant over the irritability of the blacks, and the same is true of color. A. I. Root, in some of his writings, mentioned the difficulty of distinguishing the progeny of mismated queens from pure Italians and that they sometimes excelled the Italians as honey-gatherers. (See A B C of 1878, for instance.)

Has anyone tried crossing the Italians with a really good strain of blacks? Of course, the vigor of the hybrid is not always proportional with the excellence of the strains crossed, but the best chances are in that direction. The old way of treating the blacks was to sulphur the heavy colonies and leave the lighter ones to perpetuate the stock, which was poor breeding practice, to say the least.

How about having queens of a quiet strain of Italians mated with Cyprian drones?—H. D. Tennent, Velasco, Texas.

COMMENTS ON CURRENT ITEMS.

Mr. Bain's article on his double-duty hive looks good. That it is a long way ahead of the old system there is no question.

Filling Holes in Combs

Mr. E. J. Anderson, on page 268, says that the holes made by mice are always filled with drone comb. Mr. Anderson is right, but in our early days we never allowed the bees to do a mean trick like that. We cut the comb to fit a piece of worker foundation placed in the hole. It was much less trouble than cutting out the whole comb and replacing with a full sheet. Of course, that is the only thing to do if the comb has been badly destroyed. Mr. Anderson makes a good point when he says that the presence of drone combs in the brood nest results in generations of drones replacing workers that would produce honey for the beekeeper. The one who tolerates drone comb in the brood chamber is losing money. The presence of drone comb in the brood nest has more to do with excessive swarming than any inducement to swarm.

Cause of Dysentery

Dr. Alphonsus' experiments in regard to causes of dysentery would seem to prove conclusively that less dysentery occurs when bees are fed on natural stores than when fed sugar syrup. We know that since we adopted the food chamber and years ago quit feeding sugar syrup we have had very little trouble with dysentery among our bees.

When Swarms Sting

The article on swarms and stings by Mr. Haydak was interesting. I should like to know how long those bees hung on the limb before they were hived. I think you will agree that when hived within a very short time after clustering bees are very easy to handle and very seldom sting. They are full of honey and like most people after a good dinner, much better natured than when hungry. Runaway swarms that have come a long way, and cluster in your apiary are very apt to give trouble. We have usually found that the common "blacks" were crosser than pure Italians. They were quicker to enter the hive when shaken in front, and could be scooped up with the naked hand without stinging. The most vicious bees we ever had were the yellow Holy Lands, and the Holy Land Italian hybrids were perfect demons. I have seen them spend a

whole day flying around a stove pipe chimney that stuck out of a back yard building trying to sting it.—J. F. Dunn, Ridgway, Ontario.

SPINSTER JANE SAYS—

I have been thinking a great deal about bee stings, ever since reading the experience of that gentleman so many times stung, and does not that change of color in the leaves mean the optic nerves were affected for a time? Does not bee venom affect the nerves especially, and is not that the reason for shock where the heart is weak? Lots of questions, I admit, but isn't life one big interrogation mark?

So much fuss is made over bee stings. Just suggest beekeeping to those to whom it is an unknown art, and ten out of twelve will shrug and say, "No bees for me. They sting."

Aren't we silly mortals! We "strain at a gnat, and swallow a camel." Mountain climbers persist in their dangerous climbing though they have seen many meet death that way. Sir Malcolm Campbell keeps on speeding, undeterred by the many deaths. Crashes and drownings do not stop trans-Atlantic aviation. Yet though it promises a good living, often luxury, beekeeping is taboo, because bees sting.

I listened one afternoon to a comic skit over the radio, where bees were let loose at a horse race. Pandemonium reigned, and one jockey, spurred by fear and bee stings, beat his horse to the tape. Bee stings, so much talked about, scare.

Why are there thorns on roses? Why must we have hard physical labor to be strong? Why are difficulties to overcome good for us? Do they not intrigue us, thrill us, spur us on, strengthen our backbone? Were there no rejection slips, the author would never experience the full joy of an acceptance with its accompanying check. Only by a taste of failure, can we appreciate success. And just so "stings" make honey the sweeter and the more desirable. We experience the joy of conquest of overcoming, if only our own fears.

A lady remarked to me the other day, "Queer none of you older folk have rheumatism, when it is so prevalent. It must be because of bee stings." I wonder if she was right. If so, praise be for those sharp stings. It is a wonderful thing to be supple and active though growing old.

In my own case, I never get stung if I can get a good start, nor do I hesitate to smack an attacking bee.

John, Honey Boy's father, surely knows something of stings. He was once sent to hive a swarm of bees high on a tree branch, over a shed. He doned bee-veil, and armed with one of those long-handled bee-traps, mounted the shed, hastily adjusted and opened the bee-trap, gave the limb a smart shake, and awaited results. They came in a hurry, those results. The bee trap didn't trap ALL the bees. Down they came about him, and they were not long discovering the weak spots in his defenses. He wore roomy overalls, with big floppy legs, a dandy trap for bees. Some went down inside, others hit the roof and came up, also, inside.

John dropped the bee-trap and fled to the shelter of the barn, muttering things not good to hear. As the day was hot, and flies abounded, a cow had sought refuge there before him. She stood peacefully chewing her "cud," eyes half-closed, in perfect content. But with John's coming, everything was changed. The cow came suddenly to life, and with a snort of surprise suddenly dashed from the barn, her tail lashing furiously, and tore away, trying to get free from her tiny tormentors. The bees were ready for trouble, and the moment John freed himself from their attentions by dropping those overalls, they vented their spleen on the innocent cow. No wonder John hasn't rheumatism. Bee stings did that for him, but in my case it's just keeping supple through exercise in sprinting from their occasional attacks. Yes, bees keep one from growing old.—Spinster Jane.

Passing of Fred J. Leininger

Our readers will be shocked to learn of the death of Fred J. Leininger, a valued contributor to Gleanings. Mr. Leininger spent the past winter in Florida, where he became ill. He returned to his home in Delphos, O., March 28, and passed on April 26. Mr. Leininger was born September 5, 1870, near Ft. Jennings, Ohio. Early in life he captured a swarm of bees. From this modest beginning he became one of the outstanding commercial beekeepers of the United States, producing carloads of honey yearly.

Just News

As we go to press we have word of the passing of J. H. Allemier of Delphos, Ohio. Mr. Allemier was one of the outstanding beekeepers of western Ohio.

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Herbert L. Case, of Rochester, N. Y., prominent beekeeper and a former contributor to the pages of Gleanings, passed on just recently at the age of 87 years.

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The Ohio State Beekeepers' Association has accepted the invitation extended by the Tri-County Beekeepers' Association to schedule its summer meeting to be held August 13, 14, and 15, at Delphos, Ohio. This is the heart of honey-land in Ohio and preparations are being made for an elaborate program.

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A new publication, No. 501, entitled, "Honey and Some of the Ways It May Be Used," by C. B. Gooderham, Dominion of Canada Apiarist, and M. L. Heeney, specialist in cooking and preserving foods, of the Canadian Department of Agriculture, was issued in April, 1936. This 20-page bulletin contains much helpful information on honey and it various uses.

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There will be a joint field meeting of the Essex County Beekeepers' Society and the New Jersey Beekeepers' Association, at John Conner's home, corner Mountain Avenue and Hillcrest Place, North Caldwell, New Jersey, on June 20, beginning at 10:30 a. m. Come early, bring your lunch, bee veil, and another beekeeper.—John Conner.

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The summer meeting of the Iowa Beekeepers' Association will be held July 17, at Pellett Gardens, near Atlanta, Iowa, where tests for disease resistance in bees are under way. Dr. O. W. Park and James I. Hambleton, of Washington, D. C., are on the program. John Jessup of Council Bluffs, Iowa, is the presiding officer of the association.

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The Illinois State Beekeepers' Association will hold its summer field meeting on Sunday, June 21, at Marissa, Illinois, on State Route 13, 25 miles south of Bellevue. A worth-while program is being planned. Suitable prizes will be awarded to the following: (1) Beekeeper who comes the greatest distance; (2) Oldest beekeeper; and (3) youngest beekeeper. Two years' subscription to American Bee Journal or Gleanings in Bee Culture will be given to the beekeeper who sends in the best letter of less than 300 words on the following subjects: (1) Why I Belong to a Beekeepers' Association; (2) Why I Take a Bee Journal; (3) Why I See No Advantage in Belonging to an Association. Letters should be mailed to W. E. Frierdich, Belleville, Illinois, before June 15.

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W. E. Dunham, extension bee specialist of Ohio, sends the following report: Reports on winter losses from 382 co-operators in Ohio, show that of the 12,437 colonies entering winter, 9373 were alive this spring, thus showing a loss of 24.6 per cent. Because of the backward, cold April which resulted in further losses one could safely add at least 8 to 9 per cent with an additional 17 per cent for weakened colonies that will be valueless for honey production. Ninety-three co-operators packed a total of 4555 colonies with a resulting loss of 18.6 per cent. Of the 142 co-operators who used no packing for their 2970 colonies the resulting loss was 30.7 per cent. In central Ohio one area of aproximately five square miles was thoroughly checked and all hives of farmers and amateur beekeepers examined within this territory. Excluding commercial beekeepers, there was exactly 42 per cent of dead colonies, and approximately 70 per cent of the live colonies were very weak. In checking over the reports, the heaviest losses occurred in those areas where the bees wintered on fall honey.

Heads of Grain from Different Fields

Tanzy and Salt

On page 342, 1935, there appeared an article on tanzy for keeping ants away from hives. Where I live, tanzy is plentiful and last year the first super of comb honey was not fit for sale, due to the nectar gathered from this undesirable honey plant. Conditions were not right for a large crop of honey, but many supers of honey would have been spoiled had conditions been favorable for nectar secretion. I prefer using salt to drive ants from hives. Ants despise salt and bees like it.—T. Merle Smith, Newark, Ohio.

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Moving Bees a Short Distance

On page 731, December, 1934, Allen Latham tells of moving bees a short distance by constructing a box-like enclosure over the entrance, made out of thin boards, and boring a few ⅜" holes for escapes. His theory is that this obstruction would slow down the bees and cause them to take notice of their new location. I moved fifteen swarms last June less than one-half mile by this method and it worked splendidly. Later I moved ten more to the same location by removing entrance blocks and applying a few puffs of smoke quickly and throwing about three inches of porous forest leaves and dirt over the entrances. I then ran a small stick down through the leaves and dirt, making a small opening. The bees soon dug themselves out and began hovering around the entrance. That afternoon I removed the remaining debris from entrances and could not detect any bees returning to their old location. In using the previous method I did find a few bees returning to their old location. As a matter of caution one must rake up porous dirt and have it in readiness before removing the entrance block. I don't think there is any danger of a strong colony suffocating by this method for they burrow out quite rapidly.—Floyd W. Brewer, Pierpont, Ohio.

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Do Bees Transfer Eggs?

Under "Notes from Overseas," in the Australasian Beekeeper, I read the following: "To ascertain this, the investigator (F. Fisher) tied a queen bee to a thread so that she could walk only a few inches over the comb. In spite of this there were eggs found in cells which the queen could not reach. Having solved the problem, the writer watched the bees transferring eggs into further combs. (Die Bienenpflege)." —H. D. Mutton, Kelmscott, Western Australia.

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Thank You, Mr. Jessup.

I wish to express my thanks to you and Mr. Jessup for the excellent article, "Spring Requeening," appearing in April,

I. Isaksen, Minneapolis, Minn., uses a big umbrella for shade as he works each colony. He says he can work all day when the thermometer is 90 to 95 in the shade.

1936, Gleanings. I consider the article a good one and an excellent follow-up to the one entitled, "Experiences of a Side-liner," by the same author, in June, 1935. When I find anything I want to re-read I note the article and number on the cover and had done so with the "Experiences of a Side-Liner," and each time I read it had thought that plan an exceptionally good one, so was glad for the added information given in "Spring Requeening." —Eleanor J. Neale, Gobles, Michigan.

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Honey Method of Introducing Queens

I have found the "honey method" of introducing queens very good. I cover the queen with warm honey from a comb in the hive by rubbing it over her with a finger and placing her on a frame of bees. If plenty of honey is coming in she will be all right. If not, shake sugar syrup over the bees. In about 15 minutes they will be gorged. This can be determined by opening the hive again. If they are drowsy and none fly out angrily—it's safe to introduce. However, watch out for robbing.—H. J. Rahmlow, Madison, Wis.

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Two-Story Wintering Pays

I use two full-depth hive bodies for wintering each of my colonies, and the last two winters they came through 100 per cent. In the late fall I never disturb the fixings in hives. Since using two stories for wintering each colony I do not lose many bees. I think that has much to do with good wintering, provided the upper story is full of honey and the lower story has plenty of brood and honey.—Jas. E. Russell, Thurman, New York.

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Chunk Honey Brought Extra Profit

To overcome the difficulty in roadside honey selling that frequently comes when one member of the purchaser's family likes comb honey, while another member prefers the extracted form, one beekeeper recently solved the problem satisfactorily by producing a special combination of both forms—or chunk honey, as it is frequently termed in some sections of the country. Producing this honey in shallow extracting frames, the beekeeper cut the product into smaller chunks and filled wide-mouth pint and quart Mason jars with as many chunks of this comb honey form as the containers would hold. The space between the chunks was filled with extracted honey, and the jars were then sealed and labeled for market. The buying public immediately accepted this honey and the sales soon surpassed the sales of either the comb or extracted varieties. By making honey more acceptable to the average customer and eliminating the difficulty in choosing between comb and extracted honey, the beekeeper made a success simply because he developed something different in honey merchandising.—Emory Ward, Toledo, Ohio.

Leroy Stockdale, of Riverside, Illinois, in his apiary. Mr. Stockdale is secretary-treasurer of the Cook-DuPage Beekeepers' Association.

XUM

Editorials

What About Comb Honey?

The article by Roy Rabbit on page 332, this issue on the reasons for the decline in the production of comb honey during recent years will bear careful reading. While what he says is true, the fact remains that there is a constant call for comb honey that can not now be supplied.

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International Conference of Beekeepers

When? November 22, 23, 24 and 25. Where? San Antonio, Texas, Crockett Hotel, at rates within the reach of a beekeeper. Why go? Because it will be the greatest bee event ever held in America. You can not afford to miss it. The big Centennial at Dallas will secure low railroad fares to all Texas. See the Centennial and then go to the San Antonio International Conference.

A hunting trip is being arranged to start at the opening of the hunting season just before the convention. Following it, an excursion lasting a week to the Rio Grande Valley and into old Mexico, is being arranged at a cost of $35.00 each. This pays the entire trip and all expenses. Make your reservations now.

More details will follow later. In the meantime defer your vacation till November and then visit the land of milk and honey. Texas is a land of good homes, good farms and a land of promise and opportunity. We used to say, "Go west, young man." The new slogan is "Go to Texas, young and old, away from the cold and where you can farm and keep bees the year round."

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Just Common Honesty

Said a reliable package bee man, one who does a large business, "It takes nerve to turn down a big order, return the money and say you are booked to capacity. The sight of a good check looks awful tempting, but I must take care of my old customers first." Most of the good package men this season have had to do this very thing. But there are some who, hard up for real cash, will turn it into the bank, and say, "Oh, well, I'll find the bees somewhere," and when it comes time to ship, complain of bad luck or bad weather, or "the fellow who promised me bees fell down on delivery."

It is no more than common honesty to return the money when one is booked to his capacity.

The man who says he is booked to capacity and returns the money should know if he does not already, that next year this same chap will endeavor to get in his order early. But the shipper who takes the money and falls down on the date of delivery will be avoided next time.

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Is There a One Best Bee?

We receive many letters from beekeepers in various parts of the world inquiring about the comparative merits of the different races of bees. This naturally brings up the question as to whether or not there is a one best race of bees.

Things are what they are by way of comparison always. It would be difficult to compare the various races of bees fairly. To make a fair comparison, the races being compared, should be in the same apiary, in the same type of hive and given the same management.

A comparison of races made in one locality might show one race to be superior, whereas, a similar comparison made in another locality might show some other race to be superior. It seems reasonable to believe that certain races of bees are adapted to certain regions.

To know which race is best adapted to one's locality is a question which confronts many beekeepers. May we hope that the problem may be solved scientifically in the near future.

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Shortage of Bees May Curtail Honey Crop

Reports from over the country indicate a much heavier winter loss in bees than was anticipated earlier in the season. The protracted cold spell in April killed off hundreds of weak colonies that barely survived the winter.

Southern shippers of bees and queens are taxed to their utmost capacity in attempting to supply the unusual demand for bees. There is naturally a limit to the amount of bees that can be supplied from the South in a given period of time. Unless packages are installed reasonably early, the maximum crop of surplus honey can not be secured this season.

Prospects are unusually promising for honey in most regions of the North. It seems reasonable to assume that hundreds of tons of honey may be lost due to the lack of bees to gather it. History may repeat itself in that a good honey season usually follows a very severe winter that causes heavy mortality of bees.

A number of markets are practically bare of honey. This is unfortunate for the industry and especially for the bakery trade that has been developed of late. Let us hope that at least enough honey may be produced this coming season to supply the normal demand.

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Rapid Development of Normal Colonies

It is amazing how rapidly colonies of normal strength build up in the spring when weather conditions are right, and nectar and pollen are plentiful. On April 29, one of our colonies occupying a two-story deep food chamber hive had brood in five combs. On May 19, this colony had brood in fourteen combs. Other colonies of lesser strength on April 29 made substantial gains. We have observed that colonies with three or less frames of brood at the beginning of the spring honey flow develop slowly (if at all), whereas, colonies with four or more frames of brood forge ahead rapidly.

Weak colonies in early spring are a liability and should be strengthened with queenless packages. Strong colonies in the spring are an asset to beekeepers.

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The Movement of Package Bees by Truck

Although it involves considerable risk and not a little skill as a beekeeper and as an auto mechanic as well as a driver, the movement of bees by truck from the South to the North is increasing. Almost every beekeeper of two hundred or more colonies has to have a truck as a part of his equipment. With this truck he can carry his empty cages to the South, fill them with bees, and drive back. He can make the second trip and use the same identical cages in which he brought the first lot of bees and perhaps he can make still another round trip. Under some conditions he can deliver the bees to his northern yards for about half what it would cost to deliver them by express if he does not include overhead and depreciation on his truck. To a large extent he would have the overhead and depreciation anyway, if he kept the truck in his garage. The usual size of a truck for the movement of bees is a ton or a ton and a half capacity. The last named will carry five hundred packages very easily. The bees are put in crates of three packages to the crate. The truck body should be of such a size as to load the crates without waste of space at the sides and ends. The crates should be piled one on top of the other, and fastened as the pile goes up by cross strips of wood. Bees should be loaded at night—not in the heat of the day and if possible and the weather permits, be ready to load on the arrival of the truck from the North. The bees are gorged with thin 50-50 syrup by pouring dipperfuls down through the cages over a tub just before starting. No cans of syrup are given because the bees can carry enough in their honey sacs to last the whole trip. Care should be taken to give the bees no more syrup than they can carry or they will be left daubed and sticky. This would mean dead bees in short order.

When once loaded the truck should travel night and day without stopping, the start being made at night. One driver alone could not make the non-stop trip, of course, and so there should be two husky young men, beekeepers who know how to handle a truck and drive fast, for speed is imperative. The drive North is mighty strenuous and so the drivers should spell each other at certain intervals.

The body of the truck should be so constructed that the air can shoot from the front through the packages to the rear. A large canvass should be provided to cover the bees to keep off rain or a hot sun.

Well, all this looks simple and easy and you perhaps may guess that the trucks will ultimately take the business away from the express companies. Not yet.

It should be made plain that the movement by truck is attended with great

XUM

risks. While the route can be over hard road all the way, rain, snow or ice as the truck nears destination may be encountered. The driver may go to sleep. There may be a breakdown; a flat tire on a city street under a pouring hot sun. The bees must be moved. The truck may have to be unloaded, the bees sprayed with water, or fed. Officious police may stop you; may and probably will require an extra cent and a half per mile through some states. A talk with some of the drivers convinces the editor that the movement of bees by truck is no holiday trip. The strain on the drivers who do not make a regular business of truck driving is tremendous.

The movement of bees by truck is still in the experimental stage. It may or may not cut down the movement by train. But this can be said, that the express companies may have to make further concessions if they expect to hold the business.

The series of illustrations on page 339 show how Ira Bartlett, pioneer beekeeper of East Jordan, Michigan, is moving bees by truck from Montgomery, Alabama, to East Jordan, on a ton and a half truck, five hundred packages to the truck. His son, Norman, and Walter Ellis, two husky young men and beekeepers, spell each other in driving night and day. Each man drives fifty miles when he hands the wheel to his pal, and so on. They beat railway express in time and delivery.

Mr. Bartlett has received altogether 1000 packages. He is one of the men who dequeens, lets the old bees die in the fall, and then in the spring puts in package bees.

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Revolutionary, What Next?

It is surprising to learn of some of the prominent beekeepers in the North, who kill their queens a month or six weeks before the close of the main or final honey flow, secure a crop, allow the bees to die off, and then next spring send South for packages which are put in the hives where the old bees died. The practice which seems to be almost revolutionary, is increasing among those beekeepers who are located where the winters are severe. The past winter with its heavy losses after a large part of the good stores were consumed, will start others to try out a few colonies which have been given package bees, to see how they compare in honey production with colonies wintered over. Don't put all your eggs in one basket.

After the queens are killed off there will be no brood rearing and no consumption of stores to take care of. All the bees will be fielders. The most of these will be dead when the honey flow is over.

The virgin queens which will be reared from the young larvae, are caught on a queen-excluder placed between the brood chamber and the bottom-board. The brood emerges and the young bees contribute to the quota of older bees to catch the remainder of the crop. There is no brood to feed and as it emerges the cells are filled with honey. A month or six weeks of a honey flow will put the colony where at its close the bees will die off very fast. The honey is all extracted except enough to take care of the package bees when they are received in the spring. The entrances are closed up for the winter. The forty or fifty pounds of good honey needed to carry a wintered-over colony till the next flow are saved.

The late Mr. Demuth believed that wintered-over bees were cheaper than package bees and for most beekeepers located where the winters are not too severe, this still holds true perhaps. But how about a winter like the last one? Those who had a 75 per cent loss and the remnant weak would wish they had killed their queens and had bought package bees. Suppose they had done so. Suppose large numbers of others had done so. The demand would have been so great that the package men could not have supplied them this spring. But if the practice of using package bees instead of wintered-over bees increases the package men of the South will increase their facilities to take care of the extra demand, as we are convinced they can do.

There is one fact to be considered. Three pounds of fresh young package bees are probably the equal if not the superior of four or five pounds of mostly old bees wintered over with a sprinkling of young bees. Just how the ratio would stand is not known yet. Much will depend on conditions. If it takes fifteen, twenty or twenty-five pounds of stores to bring an over-wintered colony through the winter up to the time package bees would be delivered, then pound for pound, the wintered-over bees would be cheaper; but the fact that so many leading bee men are using package bees instead of attempting to winter-over the old stock, many and

(Continued on page 370.)

From North, East, West and South

SOUTHERN CALIFORNIA, May 4.

Weather: It is most delightful but not the best for a honey flow. A high fog in the morning followed by cool, partially cloudy, days has been quite common with us. In fact, many beekeepers think a little warmer weather would have added materially to the amount of honey secured from the orange. No rain of any consequence has fallen since our last letter, and the season for rain here is fast passing.

Honey Crop: While all the other fellows are writing of honey prospects, we write about the honey crop, at least the crop from orange. The crop for 1936 is made and a part of it is in the cans. Crop yields are satisfactory in some cases and very disappointing in others. So far as we can learn, it will run from fifteen to as much as sixty pounds in some apiaries. All in all, the total may reach that of last year. Last year many beekeepers remained on their summer ranges not thinking it advisable to move to the orange, while this season the discouraging prospects caused one of the greatest migrations to the orange ever experienced in southern California. While the colony average will be lower in the aggregate, the total will be well up to that of last year.

Old honey is practically all out of the hands of the producer which in our opinion is good for the industry. If honey is to be held over into the following season, we feel that the beekeeper is not the fellow to hold it. He has enough discouraging things to annoy him without having a crop of last year's honey on his hands.

Eucalyptus yielded well in most localities. There is a chance for some very valuable investigation along the line of the value of this almost universally grown tree in central and southern California. We have heard these two directly opposite opinions as to its value to the beekeeper: "If I had to give up one or the other I would give up the orange and keep my eucalyptus ranges," and "I will move my bees out of range of the eucalyptus in early spring as I loose my field force and have no bees left to go into the orange." Oh, there are a lot of things some of us do not know about this most fascinating pursuit of ours.

Miscellaneous: The flow from the orange is practically over and beekeepers are busy taking off the honey and getting ready to move. Some will go to the north in Utah and Idaho, some back to their summer ranges, while others are still undecided just what to do. If we were to venture a guess, we would say that the summer ranges would give a fill up and possibly one extracting. Sages, wild buckwheat, and other native honey producing shrubs are very backward in their growth, possibly owing to the absence of early rains.

We are very sorry to report the passing of that friend of the beekeeper, Mr. G. Lohrli, of Riverside. For many years Mr. Lohrli handled beekeepers' supplies and bought honey as well as produced it on a large scale. His genial disposition and wise council at our beekeepers' meeting will be sadly missed. Our sincerest sympathy goes out to Mrs. Lohrli and the family.—L. L. Andrews, Corona, Calif.

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NORTHERN CALIFORNIA, May 4.

Weather: Here in the Bay District we have what we delight in telling our visitors, is the very best weather and climate in all of California. It seems to make little difference what we claim, climate and weather do not always work out to the satisfaction of beekeepers. Most any one would have to say that April was a month of ideal weather. We had no cold, no rains, sunshine most of the time. The time we had no sunshine we had fog and fog is not good for beekeeping. Just enough foggy weather to cut the eucalyptus flow slightly. When the beekeeper boasts that his eucalyptus crop averaged 100 pounds per colony, spring count, the beekeeper in some other locality who got none says, "It might have been worse."

Honey Flow: Bees in the fruit bloom

XUM

district have had to depend on the cover crops more than on the fruit bloom and the surplus has been disappointing. In fact today, May 4, the bees in some districts are pulling brood. The beekeepers are at a loss to know which way to move. The sage is not yet producing. There has not been enough rain. Pests are eating the blossoms and the nectar is not there. The mountains are not at all inviting. The honey producing plants suffered from the long, cold winter. The promising field for manzanita is still under the snow. And this is California where we have 57 varieties of climate and just as many of weather. It is fortunate for the beekeepers who move that the eucalyptus is holding out longer than usual. Some will have three extractions. However, it may take the last to carry over to the next flow.

Beeswax: The good demand for beeswax continues with very little being offered for sale. Beekeepers are learning that it pays to turn wax into foundation. Northern California has used more than usual this way this year.

Miscellaneous: Judging from the reports coming to the State Association queen and package bee producers are having a good year. The encouraging reports sent out by H. M. Krebs, State Director of inspection, showing the new counties that have put on inspectors is very gratifying to beekeepers.

Beekeepers everywhere, and especially in California, will be sorry to hear of the death of Dr. Robert B. Davy, one of our strongest advocates of the use of honey. The doctor had reached the age of eighty-eight and was in his usual good health up to within a day or so of his death, May 1. Beekeepers who were in attendance at our last convention, will recall the fine talk he gave on the subject, "There is Health in Honey."—Cary W. Hartman, Oakland, California.

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SOUTHWESTERN IDAHO, May 7.

Weather: March came in like a lamb and went out like a lion. The first day of April the thermometer registered 11 above. After the first week in April it began to warm up until the middle of the month when it reached 88. Up to date it has been normal spring weather with some cool days but most days bees were able to work.

Honey Prospects: With lots of snow in the mountains to insure plenty of water for irrigation, most producers are looking forward to a good crop. Alfalfa and clovers are looking good. The first crop of alfalfa will begin to bloom about June 1. Quite a number of packages are being installed this spring. A quite active demand for colonies of bees with lots of sales being made go to show that some one still has faith in the bees in spite of a poor season last year.

Miscellaneous: Our winter loss was much heavier than expected earlier in the season, some reporting the heaviest loss in years with many weak colonies. The warm weather in April caused bees to build up rapidly as there was plenty of dandelion and fruit bloom which furnished nectar and pollen abundantly. Black locust will be in bloom in another week. Swarming has begun where colonies were strong.—A. D. Wood, Boise, Idaho.

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SOUTH CAROLINA, May 3.

Weather: We have had very heavy rains during the latter part of March and the first of April, but since the rains have stopped it has been unusually dry. We have not had a single shower in twenty-four days. The wind has blown a great deal more than usual. These conditions have caused the honey flow to be a little slow. Poplar is in full bloom now, May 3.

Crop Prospects: Most of our spring honey plants were held back by the cold winter, and most of them are blooming at the same time. This will cause a crowded condition in hives where they are not watched closely.

Miscellaneous: Bees seem to sting quicker this year than ever before when the honey flow is at its height. Many beekeepers have asked me what has caused this spiteful condition, and the only reason I can account for it is that we are having so much wind.

When the rains stopped about the middle of April, swarming was very heavy for a few days and it looked for awhile as if the bees would put all their energy into swarming. However, I am glad to say that this tendency for them to swarm so heavily has slackened up, and if it will stay this way our prospect for a good honey crop is very good.—E. S. Prevost, Clemson, South Carolina.

TEXAS, May 1.

Weather: During the month of April the bees were held back in their operations by continued cold, dry weather. For the month there was a total rainfall of two inches, most of which fell on the 28th. While two inches was sufficient for the month it was .74 of an inch below the normal at the same time the temperature was one degree below the normal.

Honey Flow: With the exception of deep-rooted perennials, plants made no attempt to bloom until the coming of the heavy rain. The blooming of guayacan, guajilla, and mesquite did produce a honey flow of considerable size and the best quality of honey. Colonies on scales reached the low point on April 9, at which time the colony weighed 80.5 pounds. On April 30, the same colony weighed 95 pounds. It is fair to estimate that during this period more honey was used in brood rearing than was stored. With the coming of the rain a large number of annual plants, including horsemint, are blooming abundantly and the flow from this source added to that which is already stored will make better than a normal crop for this part of the state.

Miscellaneous: On May 7 and 8 Uvalde will give a most appropriate Centennial celebration, which will be styled the Uvalde Honey Festival. A queen bee to rule the festival has been selected from among Uvalde's most beautiful daughters. Proper events will mark the celebration. All places where foods are offered for sale will make a specialty of Uvalde honey. A fine exhibit of honey in containers, honey plants, and of live bees will take up the most of the lobby of the Kincaid Hotel. It is most appropriate that Uvalde, the town whose name is synonymous with the spring crop of Texas honey, should inaugurate a honey festival. It is hoped that this will become an annual celebration. (See page 345.)—H. B. Parks, San Antonio, Texas.

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MONTANA, May 4.

Weather: The weather for February and March was very disagreeable, the temperature ranging from 6 degrees below to 30 above. In April the weather was very nice. We had some rains the last of the month which were very beneficial. The dandelions are beginning to bloom, and there are enough out now so that the bees are able to gather a little nectar. The wind has been blowing some the last few days so that the bees have not had a chance to gather much.

Beeswax: The beeswax has been all sold and the price was a little above last year.

Honey Prospects: The honey is all sold. There isn't any even for local trade. As far as plants are concerned, the prospects for a honey flow seem fair. Most of the colonies are very low in feed and the bees must have fine weather to build up sufficiently to make a good crop of honey.

Miscellaneous: I have just been on a trip through the central part of the state and had reports from other sections. I find very little snow in the mountains east of us. So we may be in for a drier year than we had anticipated. However, we have had a great abundance of snow here and should have plenty of water for irrigation.

At times I have known birds to bother covers of bee hives and make a few holes, but this year when we had so much snow they pecked holes in the hand-holds and ate the combs.

Cellar wintering here has been very costly and not very successful. However, packing the bees out of doors in the yards has proved a success.

The honey producers here seem to be in a fine locality because of the C. C. C. camps, forest service, irrigation and road projects which are making good business for all concerned.

The bee men could use a lot of supplies, but we find that they are too costly, and the honey price way below normal. This makes it almost impossible for the honey producers to buy supplies, so some are going out of the business.—Parson Pile, Corvallis, Montana.

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OREGON, May 1.

Weather: Because of continued cold weather in late March and early April, the maple was about two weeks late in opening up. Maple, which ordinarily starts yielding nectar about March 20, did not start until about the second week in April. The

XUM

second and third weeks in April were open, clear weather resulting in a very heavy flow for building-up purposes. Bees built up rapidly until about the 20th. Since that time the weather has been cold and has interfered considerably with the activities of the bees. However, the season has been catching up with itself, so to speak, and the main flow from vetch will probably start about the second week of May.

Honey Crop: The honey crop appears to be about cleaned up in this section as only a small per cent of crops is held over for local use. The bees in general have come through winter in poor condition. In some cases it appears that the bees had insufficient pollen for wintering purposes. An examination of pollen made in early April indicated that many had discontinued rearing brood for a short period in late March or early April. On the other hand, it has been noticed that many colonies are unusually strong. Swarming has been late this year.

It is too early to predict how near the honey crop will approach the average, but there is every indication that it will be approximately the same as normal.

Miscellaneous: Mr. George H. Vansell of the U. S. Bee Culture Laboratory, at Davis, California, has recently spent several weeks in Oregon in connection with the honey flora studies being carried on co-operatively by the Oregon State Experiment Station and Federal Bee Culture Laboratory. Special attention this year has been given to the fruit producing areas of western Oregon. Some very interesting information has been secured relative to the influence of nectar concentration on bee activities. This information will be published in the due course of time.

Mr. W. G. Rodda, who has recently been appointed state inspector of bees has started on an extensive trip throughout the state to co-operate with local inspectors in disease control work.

On the afternoon of April 25, a hearing was called by the State Department of Agriculture to consider certain revisions in the state honey grading regulations. The principal change made in the regulations was to make the Oregon regulations conform to the national regulations and to conform with those of Washington and California.—H. A. Scullen, Corvallis, Oregon.

ILLINOIS, May 5.

Weather: Up to the first of May we had only a few warm days. Such a cold spring following the zero weather during the winter has resulted in the loss of about 37 per cent of the bees in this state. Heavy losses are reported from as far south as the central part of the state. on March 1, an examination of several apiaries showed comparatively few colonies had died at that time, but they had suffered so much from the extremely cold weather that they were in a weakened condition and unable to survive during the cold spring. The colonies that perished were not only the unpacked but in some cases even the packed bees. Dysentery was very bad. A great number of colonies that died will be replaced by package bees.

Very few colonies of bees starved to death this winter. There was plenty of honey left in the hive which the bees were unable to reach.

Honey Crop: Prospects for the honey crop as far as the clover is concerned are very good. Fields of white clover never looked better, according to all reports gathered. This is due to the wet season last year and the amount of snow that was on the ground this winter.

Miscellaneous: The local associations have been very active in calling meetings. Practically every association has held a meeting which has been well attended. Plans are being formulated for different delegations to attend the state field meeting to be held at Marissa, June 21. Many contests are going to be held at this meeting. Among them a letter contest on one of the following subjects: "Why I Belong to a Beekeepers' Association," "Why I Take a Bee Journal," "Why I Do Not See Any Advantage in Belonging to a Beekeepers' Association." The award is to be a two years' subscription to either American Bee Journal or Gleanings in Bee Culture.—C. L. Duax, Chicago, Ill.

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OKLAHOMA, May 8.

Weather: Today it has rained more than two inches. Last week brought the first rain since January 1 and turned poor crop prospects into the brightest in years.

Today's deluge was state-wide and of immense value to all agriculture.

Honey Prospects: Strong colonies have stored a half super of willow honey and were gathering unusually well from white locust until this rain. The fields and roadways are taking on new life with yellow clover opening into bloom. Considerable alfalfa blooming is noticeable this year and much of it will not be reached by the hay binders.

Colony Conditions: Colonies are either rounding into good shape or are so far behind that nothing but good packages can put them in shape for the harvest that will soon be here. Large stores have been turned into brood and a continuous flow will keep these colonies booming on through the white sweet clover bloom. In fifteen years I have never seen conditions do such a right about face in such a short time.

Miscellaneous: Considerable acreage is bearing the purple bloom of vetch which the bees are working constantly. Yellow clover and sweet clover, along the roads and outside of cultivation, will precede pastured clover by two weeks in blooming, possibly a month. This will be a great boon to the weaker colonies as much of their building up can be done before the main harvest.

With unusually good cotton prospects there is a strong likelihood of a cotton honey flow especially in the low black lands and along the Red River.

In closing, a word of tribute to our state bee inspector, Mr. L. J. Austin, whom I seldom see but whose little red X's I find on every hive in every yard and many of them far off the beaten path.—C. A. Baltzley, Oklahoma City, Oklahoma.

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GEORGIA, May 9.

Weather: It is all that could be expected for normal spring time. Bees have worked freely from ten to twelve hours a day. We are not expecting settled normal weather until the middle of May.

Honey Crop: On account of the severe winter, many bees fell from the outside of the clusters. This was very unusual, and consequently it set the bees back greatly. Brood rearing was slow coming along, therefore, not much honey could be expected, owing to the weak condition of the colonies. This is the only cause that can be assigned to the shortage of honey so far. At least seventy-five per cent of the colonies have not been in condition for honey gathering up to the present time. However, nearly all colonies in normal condition are ready for the main harvest, which comes from gallberry in the southern part of the state, from the tulip-poplar through the Piedmont section, and from black locust and poplar in the mountain region. We are now in the midst of our great honey flow with good prospects ahead.

Miscellaneous: There has never been such a scramble for bees in the history of Georgia beekeeping as we have had this spring. Package men and queen breeders have bought heavily in the surrounding territory, and northern beekeepers have invaded the entire state for bees, and locations for them. They are right here with us, all over the state, making what honey they can and getting the bees in shape for packages to take back North. In fact some have already left with truckloads for their northern homes. This is a little alarming among the honey producers who are wondering what will happen to honey production in this great heavy producing area. It would be greatly reduced now, had it not been that the producers increased their bees and equipment. Many have been offered handsome sums for their holdings.—J. J. Wilder, Waycross, Ga.

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NORTH DAKOTA, May 11.

Weather: According to reports received of late, bees which were wintered over in cellars came through very nicely, but outdoor wintered colonies did not fare so well. The prolonged winter of unusual severity, no doubt, accounted for the heavier mortality of the outdoor colonies. In general, it is believed that the winter loss does not exceed 12 per cent.

Spring was late in starting. There was very little weather fit for bee flight until about May 1. Since that date, dandelion, maple, and other early nectar and pollen sources have been available and the weather quite favorable for gathering.

XUM

Honey Plants: As to the condition of honey plants, it is believed that sweet clover is more abundant and widespread than has been the case for six or seven years, and it has wintered over in excellent condition. At this time the plants are quite noticeable along the roadsides and in fields and indications point to there being a great abundance of this crop for bee pasturage this coming summer.

Miscellaneous: In the few apiaries which I have looked over of late, I have noticed quite a lack of uniformity in the rate of brood rearing among the colonies. Some colonies have built up to excellent strength while others are weak and brood rearing is at a low ebb. This situation is probably due more to a lack of pollen stores in the weak colonies than to any other condition. It appears that colonies which carried over in their combs a good store of pollen are the ones which have made the most satisfactory progress in colony development. Naturally, brood rearing and other activities within these hives were able to proceed without interruption, while for those colonies which lacked a reserve store of pollen, brood rearing was limited and colony development retarded. In several instances during the past spring, local beekeepers have observed bees in large numbers in sheltered situations gathering dust from grain meal, possibly as a substitute for pollen.

Package bees began arriving about the first of the month. They are being used largely to restock losses which occurred during the past winter. In general, they are coming through in satisfactory condition. Just recently, one of our state beekeepers who had purchased package colonies from two sources, one from a dealer on the Pacific coast and the other from a southern state, told me that both shipments had come through in perfect condition.

It is expected that the usual amount of apiary inspection will be done during the coming season. Arrangements are being made for one deputy to spend the months of June and July in the field on inspection work.

The time and place for the summer meeting of the North Dakota Beekeepers' Association have not been set. Several of the members have expressed the hope that it will not be held until August, and that it may take the form of a beekeepers' tour and picnic.—J. A. Munro, Fargo, North Dakota.

MANITOBA, May 6.

Weather: The weather has been steadily cool. I think it has been the best shipping and hiving weather for package bees that I have ever seen. It has been perhaps a little too cool for building up but I have had no bad reports of drifting as we get with newly hived packages when we get hot spells before they are settled down. Winter losses have been heavy but we also have many reports of excellent wintering.

Honey Prospects: We have abundant moisture at this date and sweet clover should do well. The first pollen from willow, hazel and crocus is being gathered.

Miscellaneous: Money is pouring in for registration and we are organizing the inspection force for an early attack on the disease situation. It is a great satisfaction to be able to plan with the assurance that plenty of money will be provided. The nickel-a-hive registration charge along with the usual government grant, is all that we need to finance the inspection program. Money is scarce in this province, and it is likely quite a lot of equipment will lie idle this year. Those who had the cash have been able to get all the package bees required on short notice.

Besides the usual express arrivals eight truckloads from the South were delivered to Manitoba. Those reporting show two trucks each from Texas, Alabama, Louisiana, and Mississippi. One from Texas reported making the trip to Steinbach, Manitoba, in forty-eight hours with a fast- going truck and no feeder cans; his loss was less than ten pounds of bees, according to the report.

Stocks of honey are being cleaned up, and it is expected that the stocks will be much lower than last year when the new crop comes in. Standard grocery advertising has carried honey in nearly all lists throughout the year. This, in my opinion, is the finest kind of a boost for the product. When the price of honey runs around 50 cents for the number five size it gets steady attention. When it goes higher than that price other cheaper foods go into the lists. That is the way it seems to work on this market and it is just too bad for the honey producer when he is passed up when these food lists are assembled.—L. T. Floyd, Winnipeg, Manitoba.

KANSAS, May 9.

Weather: The winter in eastern Kansas broke up on February 22. Temperatures that day jumped from 15° to 18° above zero to 40° to 45° F. Winter conditions changed within two or three hours to those of spring. Snow disappeared very rapidly in one day's time. The moisture from melting snow left the soil in good condition. Winter losses of bees were considerably higher than the average in northeast Kansas, due to the protracted cold weather of January and February. Southeastern Kansas was not affected any differently than usual. March and the first week of April were alternately cold and warm. The cold was a series of low drops ranging down to 6° and 8° F. above zero.

Colony Development: During the severe freezes of March and the first part of April, bees in the northern part of the state were not able to fly to gather food when it was available, and then, following the availability of food, the flowers were killed by the freezes. The pollen stores of colonies were soon used and brood-rearing ceased during the latter part of March, and did not begin again until about April 10, when the box elders and early fruit began to bloom. Southern Kansas has not had to contend with such weather and plant conditions, and colonies have been making rapid progress toward larger populations. In northeastern Kansas, since April 10, severely weakened colonies have made rapid recovery but, in many instances, without help they will be weak colonies at the beginning of the honey flow.

Honey Crop Prospects: Plant conditions in Kansas are at the present time good, due to nicely spaced rains and suitable growing weather since April 10. At the present time white clover, *Trifolium repens*, is in bloom in southern and central Kansas. This is about two to three weeks ahead of time for the blooming of this plant in the Manhattan area. White sweet clover and alfalfa are making rapid and vigorous growth.

Miscellaneous: Shortly after reading this article, beekeepers should be thinking about attending summer meetings of the beekeepers' associations. The Arkansas Valley Beekeepers' Association is planning to hold a picnic meeting at the Park Villa in the Wichita City Park during the early part of July. Mr. Charles Dye, 544 North Lorraine, Wichita, Kansas, is secretary. The Southeast Kansas Beekeepers' Association is planning to hold their annual meeting, presumably at the farm of Mr. E. L. Yount, about three miles north of Chanute, about the second or third week in July. Mr. J. C. Miller, R. F. D. No. 4, Parsons, Kansas, is secretary. The Kansas State Beekeepers' Association is planning to have its annual meeting either on July 19 or 26 in Topeka. Mr. H. W. Stewart, Highland, Kansas, is secretary.—R. L. Parker, Manhattan, Kansas.

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NEBRASKA, May 9.

Weather: All previous records for a hard winter were broken and climaxed by 102 consecutive hours of sub-zero weather. Although nearly two weeks late, dandelion and fruit bloom are unusually heavy. Bees have derived little good from this bloom.

Honey Prospects: Honey plants are in excellent condition. Abundant snows in the east and north sections and late rains in the west and south have produced a feeling of optimism as well as the subsoil moisture we lacked last season.

Prospects are further enhanced by the government's conservation program. Much sweet clover has been planted and more probably will be. Farmers are realizing the value of bees in their sweet clover fields. Years ago we were forced to drive around looking for such pasture and it was necessary to pay a good rental fee. Now growers come to us and urge us to place our bees in their fields.

Honey Sales: For some time it has been necessary to import honey to supply local needs. Demand is slow. Chain stores retail five-pound pails for 59 cents, some producers sell at 70 cents. Past experience has proven that more honey to be sold at a lower price results in brisk sales with benefits to consumer and producer alike.

Miscellaneous: Winter losses ran unusually high, in some instances as much as 90 per cent. As a result, more package bees have entered the state this year than for the past several years. Queenless pack-

XUM

ages will be bought to strengthen weak colonies that we may harvest the big crop we feel almost sure to be ours.

Nebraska received a big boost for honey during the month of March. Demonstrations of the various uses of honey were given by Mrs. Malitta Fischer Jensen in eleven Nebraska cities. This publicity campaign included calls on food workers, grocers, bakers, restaurateurs, included four broadcasts and demonstrations before more than one thousand homemakers and high school students.—Benjamin Nielsen, Aurora, Nebraska.

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ONTARIO, May 9.

Weather: May 9, and what a glorious day it is with bright sunshine and a temperature of over 80 degrees—very warm for us at this time of the year here in central Ontario. Yesterday the temperature was 88°, almost a record breaker. Naturally everything is coming on with a rush and this morning I notice that the bees are on the first early willows. Of course, the small varieties classified as pussy willows have been in bloom for the past few days. Package bees have been delayed in many cases and with willows in bloom and weather warm, beekeepers expecting packages are doing a bit of worrying.

Colony Condition: Winter losses are quite heavy in many parts of the province and it is safe to say that 90 per cent of this loss was caused by starvation. As intimated in the last issue consumption of stores has been abnormally heavy and many beekeepers have been caught who rarely lose a colony by starvation, and naturally they do not feel very good about it. Our own loss was the heaviest we ever experienced from shortage of stores, but no doubt we have become more or less hardened and do not show enough reluctance in telling of our mismanagement, or poor judgment, call it what you will.

Bees that had plenty of stores are in good shape and yesterday I noticed at one apiary that some colonies were clustering outside—a sign that they should be out of the packing cases. These colonies hanging out are in quadruple cases and with hot weather like we are having just now, ventilation is not sufficient to keep the bees comfortable and they have to get outside.

Honey Prospects: Clover is in splendid condition and locally we have the most alsike being left for seed that we have had for ten years. Alsike has been rather a fickle yielder for the past few years, but we expect it to yield this year as it used to years ago when we were practically sure each year of 100 pounds per colony.

Honey Market: Honey markets are slow. Maple syrup has been on the market freely. If beekeepers could get as much for honey as maple syrup producers get for their products, it would be a pleasant experience.

Miscellaneous: In 1935, a lot of beekeepers had trouble with honey fermenting. Many are positive they know the cause of this fermentation. The one thing that I am sure about is that it does not pay to be too sure about anything. Extracting combs not properly cleaned by the bees after extracting is the main cause given by most beekeepers. It is also the main cause, they say, for rapid granulation after the honey is extracted. In fact, in the last issue of the Canadian Bee Journal, so good and well-seasoned a beekeeper as W. A. Chrysler says he learned many years ago that if combs were not cleaned out "immediately after being extracted," they would give trouble the next season.

For the past fifteen years we have carried over between two and three thousand supers of drawn comb which were not cleaned out by the bees after being extracted. Inspectors of honey who have looked over lots for export will tell you that every fall we have trouble in waiting for honey to granulate. So much for the granulation question.

During fifteen years we have produced quite a lot of honey, possibly well on to 2,000,000 pounds. In 1923, we had a crop of 210,000 pounds. We have no knowledge of ever having a pound of honey ferment. This is no boast but simply a statement of fact. We have been fortunate, as many better beekeepers have had trouble along this line. Surely our experience should prove that wet combs carried over are at least not a major cause of fermentation or early granulation of honey, and may I be pardoned for thinking that it is not even a minor one.—J. L. Byer, Markham, Ontario.

An International Exhibit of Honeys, San Antonio, Texas, November 23-25, 1936.

Probably not more than once in a lifetime will the beekeepers in the United States and Canada have an opportunity on one occasion to sample honeys produced all over the world. And that's what is going to actually happen at San Antonio.

With an idea of trying to make the San Antonio convention an international convention of honeys, as well as beekeepers, as early as November, 1935, samples of honey were solicited from countries all over the world, to be exhibited with photographs and other material available from these countries. So far, twenty-one countries (nineteen overseas) have indicated their interest and willingness to co-operate. Samples of honey characteristic to the United States and Canada have been solicited, and leaders in twenty states have agreed to help. In this way, the official exhibit of the American Honey Producers' League at the San Antonio meeting will have a truly world-wide representation of honeys.

Some of the honey samples are already on their way to the United States, and the League is very much indebted to beekeeping friends and leaders in the foreign countries participating, as well as those in the United States and Canada who are helping to make the exhibit live up to its title of "international."

So, if you have been wishing to visit your beekeeping neighbors in other parts of the United States and Canada, and in neighboring countries, to become familiar with beekeeping conditions, apiary methods, and the kinds of honey produced, you will want to be at San Antonio to participate in the "honey convention." To delight the tastes of honey connoisseurs, samples of hymettus, rosemary, sainfoin, heather, encalyptus, and other rare and delicious honeys that many of us have read about and yearned to taste, will be displayed.—Arlene Weidenkopf, Secretary-Treasurer, American Honey Institute, Madison, Wisconsin.

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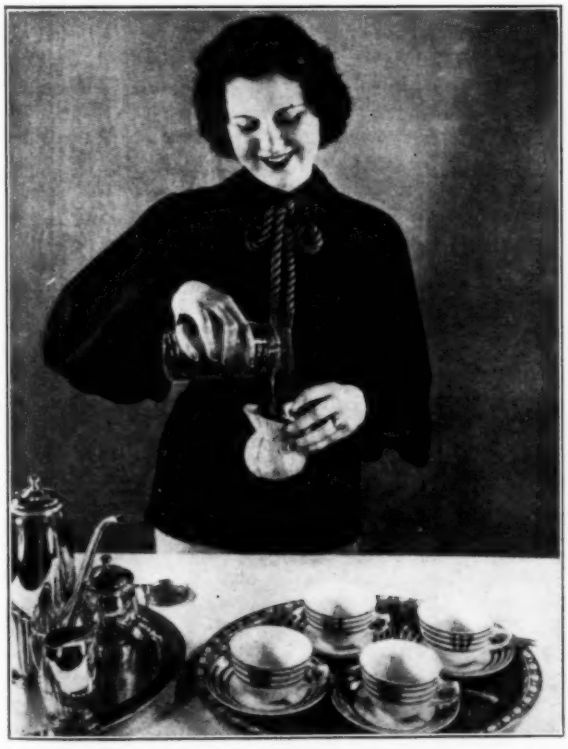


By courtesy of Modern Science Institute, Inc., Toledo, Ohio.

Honey Used to Sweeten Coffee

Honey is one of the oldest foods known. In fact, it is reported that a jar of honey placed in the tomb of one of Egypt's great queens some 3300 years ago was found recently still liquid and fragrant after all those long years. Honey is not only a delicious food, it's also a healthful one. Child specialists stress its virtues in children's diets because honey needs practically no digestion. The flavor of honey is due to the aromatic substances found in the nectar of flowers. Incidentally, if you wish to experience a new thrill in your morning, afternoon or evening coffee, try adding a bit of pure honey. The next time you serve coffee when you entertain, include a jar or pitcher of honey along with the cream and sugar. — (This publicity is sponsored by the Owens-Illinois Co. of Toledo, Ohio.)

XUM

Talks to Beginners

M. J. DEYELL

Just the other day we had a visit from a New Zealand beekeeper. Bees in that country are quite inactive during our summer months, the major honey flows occurring there in November, December, January, and February. Of all the months of the year, June is one of the busiest for beekeepers on this continent, especially in the northern states and Canada. In some parts of the South, the first major honey flow is over.

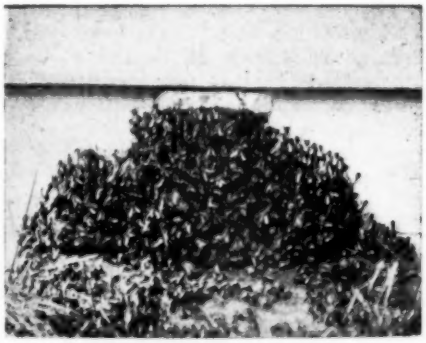
Value of Knowing One's Location

As stated in previous talks, it is very important that each beekeeper make a study of his own locality with a view of knowing the major and minor honey plants, sources of pollen, and when the main honey flows occur. As a matter of fact, hive manipulations should be timed quite accurately to have colonies up to full strength at the proper time. In many instances, colonies are too weak to take advantage of the main honey flow and consequently much surplus honey is lost.

Beginners in the white clover and alsike regions experience a relatively short and rapid honey flow, lasting perhaps three weeks or a month. It is extremely important that all colonies be up to the peak of strength when the honey flow begins. There is likely to be more swarming, because the alsike flow is very intensive, the bees get excited, and may start queen cells, especially at the beginning of the flow. During muggy rainy weather, which frequently prevails in these regions, bees are kept in and swarming may result because of congestion within the hives. It is quite important that strong colonies be given ample comb space early to prevent congestion, and thus avoid swarming, if possible. As a rule, the swarming problem is not so acute in sweet clover regions, because the weather usually permits the bees to work day after day and when they really do get down to business they are not likely to start queen cells. The nature of the weather has something to do with swarming. When it does occur, it is necessary to handle swarms and manipulate hives properly. See page 367 of the "Gleaned by Asking" Department for the proper method of handling swarms.

Providing Ventilation for Bees

In the production of extracted honey, it is a simple matter to give each hive some ventilation during the hottest summer months. A method which we have followed, which has proved quite successful, consists of pushing each pile of supers together with the queen excluder, forward one-half inch. This makes a small one-half inch opening at the back of each hive, directly above the brood chamber, which



This clustering out may indicate intention to swarm.

helps to keep the hive cool, especially the brood chamber. If hives are properly tilted forward, as they should be, with the back of each one-half inch higher than the front, any small amount of rain that might enter this small opening at the back of the hive will easily run out of the hive entrance.

Value of Young Queens

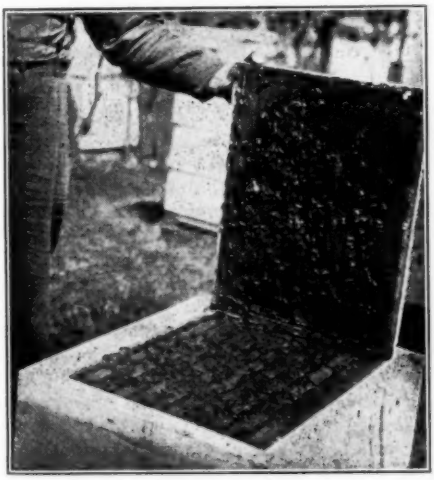
Colonies with old queens swarm quicker as a rule than colonies with young queens. By an old queen is meant a queen over two years old. Many beekeepers requeen all colonies annually in order to be assured of having young prolific queens.

Importance of Proper Supering

It is safe to say that tons of honey are lost each year because beekeepers fail to provide supers in ample time. Frequently the honey flow is on before the beekeeper realizes it, and, consequently, the bees will clog the brood chambers with nectar and begin to cluster on fronts of hives. Under these conditions bees usually start queen cells and swarm in a short time.

Supering for Extracted Honey

It is customary at the beginning of the main honey flow to find the queen, which may have access to the combs in two supers (if a super has been added during the early honey flow, or, if the colony occupies a two-story, or food-chamber hive). The queen is put down into the lower brood chamber below the queen excluder. The upper super, or food chamber, which may contain some combs of brood, is raised up to the top of the pile, and the fresh super is placed directly over the queen excluder. Another super is added directly over the queen excluder as soon as the one previously given is partly filled, or,



A populous colony that is ready for supers.

when the two outside combs contain some nectar. This method of supering is used quite generally. It necessitates lifting off and on, filled and partly filled supers.

Supering on Top

For the past two or three years we have been practicing top supering. This method of supering is very simple. As a matter of fact, it is so simple there isn't much to it. The queen excluder is placed above the second story, or food chamber, which also becomes a brood chamber during the heavy brood rearing season. The first super is placed over the queen excluder. As soon as this super is partly filled, another super is placed on top. This saves lifting filled and partly-filled supers. Furthermore, it is an easy matter to remove the hive cover, to take a peek into the super on top, to see whether or not another super is needed. The main thing to keep in mind when using this method of supering is to provide supers in ample time to avoid congestion in the brood chambers. Many of the bees from the brood chamber will go up into the top super to carry on comb building and thus congestion in the brood chamber of the hive is relieved. A number of beekeepers in various sections of the country tell us that they have tried out top supering, and that it works. It reduces labor and time in apiary management, which, in turn, cuts down the cost of honey production.

Supering for Comb Honey Production

Assuming that each colony occupies a double-story standard hive at the time the first comb honey supers are given, each hive should be reduced to one-story. In a double-story ten-frame hive it is not uncommon to find colonies with brood in from ten to fifteen combs early in June in this latitude. The oldest brood should be selected from the two stories, and put into the bottom brood chamber with the queen. The remaining combs containing honey and small patches of brood, in what was the upper brood chamber, can be placed with adhering bees on a bottom-board beside the old hive and given a cover. The bees in this set-aside hive may be given a queen, or, in three weeks' time a young queen will be reared from larvae. If there are available queen cells in colonies that are preparing to swarm, one of these ripe queen cells can be given to each hive that is set aside and in ten or twelve days these hives will have young laying queens.

During a normal season these food-chamber supers that are set aside will be practically filled with honey and will have young queens at the close of the season. When the surplus honey is removed from the parent hives, these food-chamber colonies with young queens can be set back onto the parent hives. As a rule, the young queens in the upper hives will be retained and the old queens below will be killed. This is requeening without dequeening.

To get back to supering, a colony that is very populous in bees can be given two comb-honey supers at once, instead of one. As soon as the first super, or supers, are half filled, another super should be added and placed next to the brood chamber. As soon as all the foundation in the sections is drawn out in the last super given, it is time to put on another super.

(Continued on page 376.)

XUM

Gleaned by Asking

THE EDITORS

Introducing Queen Cells

Question.—Will a queen cell be torn down if introduced to a colony that has queen cells already started?—M. F. Whitman, Alabama.

Answer.—Something depends on the nature of the honey flow, the condition of the colony, and weather conditions that prevail at the time the queen cell is introduced. We assume that the colony would be queenless. If a ripe queen cell is introduced to a colony having young or unsealed cells, the ripe cell introduced might be torn down. On the other hand, if a ripe queen cell is introduced to a colony already having advanced or ripe queen cells, the one introduced might be accepted. We have found that better success can be attained by introducing unsealed cells rather than sealed cells to strong colonies from which queens have just been removed.

Sainfoin

Question.—Please tell me something about sainfoin as I have seen it mentioned in the bee journals recently.—Mossom Deyell, Ohio.

Answer.—Sainfoin, meaning "Wholesome hay," is a forage plant native to central Europe and has been cultivated in France for 400 years. It was introduced into the United States about 90 years ago. It is more nearly like alfalfa but grows better in poor soil than alfalfa. It requires lime to thrive and in a dry location will continue to grow as much as 20 years, but usually lasts only about three. It is rich in nectar and the flowers are open to permit the bees to readily gather the nectar. The flowers are pink and make a head more like crimson clover in length, tapering to the tip. It has deep roots and once established withstands more drouth than most forage plants. It starts to grow early and hence should be sown in the spring to get enough growth and prevent being heaved out in winter. The botannical name is "Onobrychis sativa."— C. E. Kendel of Kendel Seed Co., Cleveland, O.

Moving Bees by Auto

Question.—I have some bees to move a distance of fifteen miles and I want to get them moved before hot weather comes. How should I go at it? Is it necessary to provide ventilation for the bees en route?—Wm. N. Wheat, New Hampshire.

Answer.—It is necessary only to fasten a wire screen over the entrance of each hive early in the morning before the bees start to fly, or late in the evening after the bees are all in, then load the hives on to the auto, handling as carefully as possible. It is an advantage to move during the cool of the day. If moving is done before hot weather comes, it is necessary only to use entrance screens. It is essential that screens be removed as soon as the hives are delivered to the new location.

Time to Install Packages

Question.—Circumstances prevented my purchasing packages of bees early this season, as I had planned. However, I now find it possible to get some packages in early June. Do you think this is too late to order packages? In this locality there is usually a honey flow from clovers starting about June 10 and lasting until July 20. Then there is a good fall honey flow during August and early September.—Walter Graham, Pennsylvania.

Answer.—For best results with packages it is preferable to get them into hives from six to eight weeks before the main honey flow begins. This gives the packages time to build up to normal colonies in time to take full advantage of the flow. As you are likely to have a fall honey flow, packages installed early in June should build up rapidly on the clover honey flow and if it should be long drawn out you might secure some surplus from the clovers. In any event, colonies developed from packages installed early in June should be in prime condition for the fall honey flow, and if conditions prove to be favorable some surplus fall honey may be stored and the colonies should be in excellent condition for winter.

Bees Refuse to Work in Supers

Question.—Nearly every year I have trouble getting my bees to store honey in the supers. Some colonies do go up into supers without any hesitation but most of the colonies put a little honey in the supers and then loaf and quite often start queen cells. What can I do to make them work in supers? I produce comb honey.—W. B. Sherman, Illinois.

Answer.—The past four or five years have not been favorable for comb honey production. In fact, conditions in some regions have been unfavorable for producing either extracted or comb honey. For producing comb honey successfully conditions must be favorable. A heavy honey flow of considerable duration is needed. All colonies must be boiling over with bees at the time the flow begins and each colony should be headed with a young

prolific queen. Supers should be supplied in ample time to prevent congestion in the brood chamber. Producing comb honey successfully requires experience and skill. Let us hope that this coming season may prove to be favorable for the production of comb honey. Prospects do look encouraging at present.

Hiving Swarms

Question.—When a swarm comes out should I cut all queen cells and try to put the swarm back in the same hive, or should I hive the swarm on a new stand?—Chas. A. Ruppel, Iowa.

Answer.—It is inadvisable to return a swarm to the hive from which it issues, even though all queen cells are destroyed, because the swarm would doubtless come out again as soon as fresh cells would be started. When a swarm issues and alights on a bush or tree the hive from which the swarm issued should be moved to a new stand at least five or six feet away from its original location. A new hive containing either frames with full sheets of comb foundation should be placed on the old stand and the swarm should be shaken in front of the new hive on the old stand. Ordinarily the bees will enter the new hive. When full sheets of foundation are used for the swarm it is an advantage to take from another hive a comb of brood and put it into the hive intended for the swarm in order to induce the bees to get established in their new home more readily. Any supers that are on the old hive should be transferred to the new hive. Bees that are in the fields while the swarm issues will return to the new hive on the old location and thus the swarm will be strengthened. In about six or seven days the parent hive that has been set aside may be removed to a new location at least 15 or 20 feet away. If the hive is moved during the middle of the day the field bees from the parent hive when returning will go into the new hive containing the swarm and thus the swarm will be further strengthened. In due time there will be a young laying queen in the parent hive that has been carried to the new location.

A Method of Swarm Prevention

Question.—Is it possible to prevent swarming after queens cells have been started? I find that destroying cells does not always prevent swarming.—J. L. Price, Kentucky.

Answer.—Swarming can be prevented entirely by removing the queen from the colony preparing to swarm and introducing a young laying queen 10 days later and destroying all queen cells. In order to find all queen cells, it is necessary to examine each comb carefully, shaking the bees from each comb to be sure no cells have been missed. The combs should be examined carefully again in nine days, to destroy the second lot of cells that may be started. In building the second lot of queen cells the bees often build short cells over some of the larger worker larvae, which, when sealed, project only slightly beyond the cappings of worker brood. Extreme care must be taken to destroy every cell to make this method successful.

Using Queen Excluders

Question.—Are queen excluders necessary in honey production? The other day a beekeeper told me he never used them, and still another man said he always used them. I produce extracted honey mostly and a little comb honey.—H. C. Whitney, Iowa.

Answer.—Queen excluders are used quite generally in producing extracted honey. Very few progressive beekeepers will tolerate brood in combs of extracting supers. The use of the bee escape makes it necessary for queens to be kept out of supers in order to facilitate handling supers satisfactorily when the honey is extracted. When good queen excluders are used in extracted honey production the beekeeper knows where to find the queen and he is never troubled with finding brood in the supers. Queen excluders are not needed in the production of comb honey.

Management of Food Chamber During the Honey Flow

Question.—I have all of my colonies equipped with deep food chambers and I produce extracted honey. How should I manage these colonies during the main honey flow from clover, which begins about June 20 and lasts until the middle of August?—S. V. Goodhall, Michigan.

Answer.—There are various methods of manipulating the food chamber during the honey flow and the method to be used depends largely on the nature of the flow. In your locality where honey flow is of considerable duration you may leave the food chamber on top of the brood chamber during the honey flow. The queen excluder is placed on top of the food chamber and supers are added as needed. This method which gives each queen access to two sets of combs is by far the simplest method and is adapted to sweet clover regions where the honey flow is long drawn out and tapers off gradually during its close. This gradual tapering off helps to insure having the food chamber well filled with honey at the close of the honey flow, the queen being crowded down into the lower hive or brood chamber proper.

XUM

BUY AND SELL HERE

CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate—7 cents per counted word each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in the 15th of month preceding.

HONEY FOR SALE

The reliability of honey sellers is not guaranteed, although strict references are required.

FANCY clover and fall honey. Kalona Honey Co., Kalona, Iowa.

FOR SALE—Extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

CHOICE MICHIGAN clover honey in new 60's. David Running, Filion, Mich.

WHITE clover comb and extracted honey. Porterholm Apiaries, Adrian, Mich.

FOR SALE—Extracted honey in new 60's. H. Blitz, Box 3438, Philadelphia, Pa.

FOR SALE—White amber and buckwheat extracted. F. W. Lesser, Fayetteville, N. Y.

FOR SALE—Fine grade light amber bulk comb honey. Hyde Bros., New Canton, Ill.

ORANGE, palmetto or amber honey in new sixties. Peter W. Sowinski, Fort Pierce, Fla.

FOR SALE—No. 1 white honey and light amber. The Hubbard Apiaries, Onsted, Mich.

WRITE me for prices and samples of honey. I can please you. Thos. D. Sherfick, Shoals, Ind.

WHITE comb honey, partly candied, $2.00 case; amber, $1.75. C. B. Howard, Geneva, N.Y.

TUPELO HONEY—Will not granulate. Barrels and 60-lb. cans, 7 and 8 cents per lb. Anthony Bros. Honey Co., Apalachicola, Fla.

OUR 1936 crop of best Michigan clover honey should be ready for the market in July. Speak for your requirements. E. D. Townsend & Sons, Northstar, Michigan.

FOR SALE—Well ripened white sweet clover honey. Don't let your customers be without honey. The stock we furnish will please them. Write today for prices. Colorado Honey Producers' Association, Denver, Colo.

HONEY PACKERS—Write us for prices and samples on California and western honeys. We stock all varieties. Hamilton & Company, 108 West Sixth St., Los Angeles, California.

NEW YORK State comb and extracted honey, buckwheat and clover, any quantity, all size packages. Five-pound pails my specialty. Edward T. Cary, Midland Ave. and Tallman St., Syracuse, N. Y.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTE—We will not guarantee any honey buyers' financial responsibility and advise all beekeepers to sell for cash only, or on C. O. D. terms except when the buyer has thoroughly established his credit with the sellers.

WANTED—Dark honey, also capping melter honey. Edw. Klein, Gurnee, Ill.

WANTED—Comb and extracted honey. Mail sample, state quantity and price. Sherfick Farms, Shoals, Ind.

WANTED—White, amber and overheated honey. State price. C. Jankowski, Russell, Ill.

WANTED—Carlots of honey, state quantity, shipping point and price. Mail sample. Bryant & Cookinham, Inc., Los Angeles, Calif.

WANTED—Car lots or less; clover extracted honey and light amber, new cans. Clover Blossom Honey Co., 712 Kossuth St., Columbus, O.

HIGHEST CASH PRICE for your beeswax. Write for my high prices and shipping tags before disposing of your wax. The Walter T. Kelley Co., Paducah, Ky.

FOR SALE

EMPTY 60-lb. cans and cases, used once. Chas. Kohr, 9245 So. Western Ave., Chicago, Ill.

PIERCE automatic queen grafting tools, $1. Aluminum electrical uncapping knives, $5 and $7. 340 Crosby St., Pasadena, Calif.

HOFFMAN FRAME, mail order brand, accurately made; $35 per 1000, f. o. b. Medina; while stock lasts. The A. I. Root Co., Medina, O.

FOR SALE—Comb foundation at reduced prices. Plain wired and thin section. Wax worked at lowest rates. E. S. Robinson, Mayville, N. Y.

QUALITY bee supplies. Prompt shipment. Reasonable prices. We take honey and beeswax in trade for bee supplies. The Hubbard Apiaries, Onsted, Mich.

WIRED FRAMES—Shipped K. D., nail up perfectly, no warped combs. Let us prove it. Discount on trial order. Catalog free. A. E. Wolkow Co., Hartford, Wis.

BEST QUALITY soft white pine Hoffman frames, $30.00 per thousand. Complete line of bee supplies manufactured by us. All prices the lowest. Free catalog. The Walter Kelley Co., Paducah, Ky.

BEST quality bee supplies, attractive prices, prompt shipment. Illustrated catalog upon request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Assoc., Denver, Colo.

ROOT No. 25-B 4-frame multiple reversible hand extractor, in good condition. Used about 5 years. Price, $35.00, f. o. b. Valley Falls, Kansas. Claud Lane, 1201 Walnut St., Valley Falls, Kansas.

FOR SALE — Fine quality queen-mailing cages; Root quality bee supplies; both comb and extracted honey. Orders filled promptly. Write us or drive over M53, fifty miles north of Detroit. Hamilton Bee Supply Co., Almont, Mich.

SPECIAL—While stocks lasts. We have a limited supply of slightly damaged copies of the previous edition of "Starting Right with Bees." Price, 30c postpaid. We also have some damaged copies of the new A B C and X Y Z of Bee Culture, which are priced at $1.50 and $2.00. The A. I. Root Co., Box G-7, Medina, Ohio.

AUTOMATIC swarm trap. Circular free. Vikla Mfg. Co., Lonsdale, Minn.

FOUNDATION mills for thin section; also medium brood. W. Abbott, Exeter, Ont.

YOUR wax worked into medium brood foundation for 15c pound. Fred Peterson, Alden, Iowa.

ELECTRICAL uncapping knives with transformer, 110-120 volts, 60 cycles, $14.00. Paul Krebs, 8000 Fulton Ave., Detroit, Mich.

BEES AND QUEENS FOR SALE

GOLDEN Italian queens. Untested, 50c each. San Hinshaw, Randleman, N. C.

LEATHER-COLORED Italian queens. Good honey-gatherers, very gentle. J. F. Diemer Co., Liberty, Mo.

"SHE-SUITS-ME" queens. See page 186 of March number. Send for price list. Allen Latham, Norwichtown, Conn.

CRUMMEY'S better-bred three-band Italian queens. Satisfaction guaranteed, 50c each. John A. Crummey, Box 351, Jesup, Ga.

THREE-BANDED Italian bees and queens. Write for circular. Alamance Bee Company, Geo. Elmo Curtis, Mgr., Graham, N. C.

REITZ'S queen bees. Will accept honey or beeswax as cash for queens. Send samples of honey and price. J. W. Reitz & Bros., Summerfield, Fla.

THE NORMA ROY APIARY—Italian bees with queen on comb, brood and honey; 2 lb., 1 comb with queen, $2.00; 3 lb., 1 comb with queen, $2.65. Norma E. Roy, Hessmer, La.

EXTRA yellow Italian queens that produce bees a little more yellow than the three-banded; more gentle and just as good workers. Untested, 50c each; tested, $1.00. Health certificate and satisfaction. Hazel V. Bonkemeyer, Randleman, Rt. 2, N. C.

CAUCASIAN queens and package bees after June 1st; untested queens, 50c each; 2-lb. pkg. with queen, $1.95 each; 3-lb. pkg. with queen, $2.55 each. Safe arrival and satisfaction. Lewis & Tillery Bee Co., Greenville, Ala.

CAUCASIAN bees will increase your honey production and winter better. Queens, 50c each. Two-pound package bees, with queen, $2.00. Three-pound package with queen, $2.60. Full weight and safe arrival guaranteed. P. B. Skinner Bee Co., Greenville, Ala.

GOLDEN Italian queens that produce workers, very gentle to handle, good honey gatherers, health certificate, satisfaction guaranteed. Select tested, $1.50; tested, $1.00; untested, 50c. D. T. Gaster, Rt. 2, Randleman, N. C.

HAVE a limited number of packages "bulging with bees," the kind you will be pleased to receive, for June and later deliveries. You will be pleased with my June packages. Either Italian or Caucasian stock. Also queens of both strains. Write me for further particulars. E. D. Townsend, Northstar, Michigan.

CHOICE bright Italian queens that are a pleasure to work with and be proud to own. The stock has been bred and selected in the North the past 33 years for good winterers, hustlers, gentleness, and fine color; 75c each; dozen, $8.00; breeders, $6.00. Emil W. Gutekunst, Colden, N. Y.

MAYEUX BEE FARM—Italian bees and queens, Honey Girl strain, for June delivery; will ship on comb of brood and honey, or combless; 3 pounds bees with queen, $2.65 each; 4 pounds bees with queen, $3.35. Queens, untested, 50c each. Safe arrival guaranteed. Mayeux Bee Farm, Alex. L. Mayeux, Prop., Hamburg, La.

SILVER RUN QUEENS—We offer queens from the best three-banded stock we can breed or buy. Cells built in mammoth colonies. Queens mated from strong nuclei. Each queen carefully inspected before shipment. We have reared thousands of queens that have given satisfaction throughout United States and Canada, working for up-to-date southern queen and package shippers. Write for special price on number of queens you need. Our motto: Each queen an advertisement for SILVER RUN APIARIES, Route 1, Phenix City, Ala.

LIGHT 3-BANDED ITALIAN QUEENS. We are one of the largest growers of queens in the United States, producing 100 queens or more daily. We feed tons of sugar annually, and spare no expense in any way, so that our queens are fully developed, fine, large beauties that will give you more than ordinary service and satisfaction. We can ship your queens quick from Paducah. We ship only young, laying queens and guarantee them to be purely mated, and satisfactory to you. You are the judge. Price, 50c each. To dealers, 42½c each. We need dealers in many localities. The Walter T. Kelley Co., Paducah, Ky.

WANTED—BEES

CASH paid for bargains in bees. Complete apiaries considered if price is genuine bargain. New York or New England. Geo. Lesser, Johnstown, New York.

WANTED—Several hundred hives of bees in central or western New York. Must be free of disease in ten-frame or Jumbo hives. No eight-frame hives wanted. Price must be reasonable for cash. John J. Lewis, Lyons, N. Y.

HELP WANTED

HELP WANTED—One more helper. Apiary work. M. E. Ballard, Roxbury, N. Y.

WANTED—To hear from experienced man to run bees. Box 113, Care of Gleanings in Bee Culture, Medina, Ohio.

ELECTRIC PUMPS

WORLD'S SIMPLEST ELECTRIC PUMP—Only one moving part. Nothing to wear or cause trouble, 28-foot suction lift. Operates cheaply. Money-back guarantee. Thousands satisfied users. Write for free catalog, Dept. 256, Westco Corp., Davenport, Iowa.

MISSING

W. LLOYD HARBOUR—Born near Eaton, Colorado, April 10, 1899. Age 37. Height 5' 7" to 5' 9". Weight, 235 pounds. Thick brown hair; brown eyes; very even teeth. Scar in palm of right hand. Tatoo of sinking ship on forearm. Last seen in Klamath Falls, Oregon, in the fall of 1935. Especially recommended as being very efficient apiarist; also reliable mechanic. Father warned by hospital doctors to find his son. Notify W. E. L. Harbour, care Major C. C. Townsend, Greeley, Colorado, Box 313.

MISCELLANEOUS

WANTED—Fence separators for T supers. Fred Loucks, Lowville, N. Y.

PLANT tansy seed to keep ants away. Send card for prices. A. E. Burns, 184 Appleton St., Arlington, Mass.

NORMAN BROS.' QUEENS

By Return Mail

FRESH FROM OUR YARD

Increase your crop yield by requeening with NORMAN BROS.' bright 3-banded selected honey-gathering strain of Italians. These queens are reared on a good steady honey flow, making them large in size. They fill the hive with eggs that produce bees that are honey gatherers, easy to handle and disease resistant. You make no mistake in purchasing some of these queens. Safe arrival and satisfaction guaranteed.

PRICES REMAINDER OF SEASON:

Untested queen, any number.... ....50c each
Tested queens, double the price of unt. queens.
2-lb. pkg. with queens, any number, $1.95 each
3-lb. pkg. with queens, any number, 2.55 each

Norman Bros. Apiaries, Ramer, Ala.

DEALERS ATTENTION

We have a special proposition of interest to all dealers or to all beekeepers who wish to become dealers of Beekeepers' Supplies. Write for information. All goods are GUARANTEED SATISFACTORY.

Falcon Quality Products

W. T. Falconer Mfg. Company
Falconer, New York

MOUNTAIN GRAY CAUCASIAN QUEENS FOR JUNE

at 50c each, untested, any number; tested, $1.50 each; select tested, $2.00 each. 10 years ago a price like above was not thought possible for such quality queens, as they could not be bought, even at any price, in this country. For easy handling and good honey-gathering, try Caucasians.

BOLLING BEE CO.
BOLLING, ALABAMA

EDITORIAL

(Continued from page 354.)

possibly the most of them old bees, would tend to show that three pounds of young fresh bees are much superior to four or five pounds of wintered-over bees, mostly old ones.

In all frankness, it should be said that wintered-over bees versus package bees is in an experimental stage. No one should jump to conclusions as yet. It may take years to decide the question. Much will depend on the locality and the man.

Don't forget this: Suppose you let your bees all die in the fall and that the next spring your package man falls down on delivery. He has your money. You wire and implore, that in order to get your crop, you must have your bees now. He has booked others for the same date of delivery. He has run short of bees. He finally sends them, but three weeks late. There is not time for you to build them up for the first flow. Wow! Blankety blank!!! Your crop is lost!

Moral: Deal with a reliable shipper with a good record. Be wary of the man who cuts prices to get business.

HONEY CARAMELS

MADE WITHOUT SUGAR

35c PER BOX ■ HEALTHFUL DELICIOUS

At Health-Food and Confectionery Stores, or postpaid direct from

The Honey Caramel Company of America
Honey Brook Pennsylvania

GOLDEN ITALIAN QUEENS

The rest of the season, 50c each.
2-lb. package of bees with queen....$1.95 each
3-lb. package of bees with queen.... 2.55 each
Quality and service are still to be considered when ordering queens and bees. Safe arrival and satisfaction in U. S. and Canada.

E. A. SIMMONS APIARIES
Powell Owen, Mgr. Greenville, Ala.

QUEENS QUEENS

ITALIANS

Daughters of Imported Mothers.
Guaranteed to be good.
50c each, June 1st or later.

THE CROWVILLE APIARIES
RT. 1. WINNSBORO, LA.

LOOK!

Three-banded Italian bees and queens of fine quality. They are real honey-gatherers and gentle to work with. Safe arrival and satisfaction guaranteed. Write for circular.

ALAMANCE BEE COMPANY
Geo. Elmo Curtis, Mgr. GRAHAM, N. C.

BOOK YOUR ORDER NOW FOR

Thagard's Master-Bred

IMPORTED ITALIAN BEES AND QUEENS

For eighteen years we have bred from breeders direct from Italy. Our strain is bred for gentleness and honey-producing qualities.

Here's Why Mr. Stoller Prefers MASTER-BRED BEES

"Last year we ordered some of your dark Italian queens. We notice your strain may be worked in rainy weather, or when our strain will sting. But the bees, of course, are not so beautiful. They are very good honey gatherers, and work better than the light strains in cool weather. Stoller Apiaries."

We have hundreds of other letters similar to this one.

Thousands of Package Bees to Offer

We are in position to make prompt shipment on all orders large or small.

PRICES

Two-pound package with queen.....$1.95
Three-pound package with queen..... .. 2.55
Untested queens, each ..... .50

WRITE FOR CIRCULAR AND PRICES IN LARGE QUANTITIES.

THE V. R. THAGARD COMPANY
Established 1918
GREENVILLE, ALABAMA

PACKAGE BEES AND QUEENS

Our bright Italians are good honey-gatherers. Owing to our special breeding method they swarm less, they build up fast. We make prompt shipments and use light cages. No disease ever been in our county. 2-lb. pkg. with queen, $2.45; after June, $1.95. 3-lb. pkg. with queen, $3.15; after June, $2.55. Queens, 75c each. After June 1, 50c each. Safe arrival, satisfaction guaranteed.

TAYLOR APIARIES, LUVERNE, ALABAMA

A Good Rule to Go By

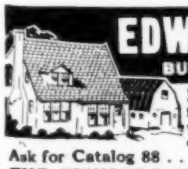
Buy your bees and queens from

ALABAMA APIARIES

MT. PLEASANT, ALA.

Queens, 50c.

Packages, $1.95 and $2.55.



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BUY NOW . . SAVE MONEY

Protect your buildings from fire, lightning, wind and weather before advancing costs force next price raise.

Ask for Catalog 88 . . . Send roof measurements.

THE EDWARDS MANUFACTURING CO.
633-683 BUTLER STREET CINCINNATI, OHIO

Get Running's Queens

And Get Honey—They Satisfy

The kind WE use in our extensive Michigan Apiaries, where WE produce honey by the carload.

Accredited and certified ITALIAN stock, bred for gentleness and honey-getting.

Price, any number, 50c each.

QUICK SERVICE

DAVID RUNNING
Sumterville, Alabama

QUEENS

We are now shipping HOLLOPETER'S strain of choice three-banded Italian queens. This strain is hardy, hustling, honey gathering Italians, not inclined to swarm and easy to handle.

Untested queens, each, 60c; two or more, 50c each. Tested queens, each, $1.

WHITE PINE BEE FARMS
Rockton, Pa.

(With Gleanings from 1911.)

QUEENS, 50c EACH

For balance of season. And they are those Palmetto Quality Queens—the three-band Italians that don't disappoint you. Orders from wholesale dealers solicited. 15% discount to dealers. No disease.

C. G. ELLISON, BELTON, S. C.

ITALIAN QUEENS

Shasta Apiaries

SHASTA, SHASTA CO., CALIF.

Express Office, Redding, Calif.

GEO. W. MOORE F. W. CHAPMAN

World War Vet.

NORTHERN ITALIAN QUEENS

Member V. F. W. Post No. 587.

Queens that satisfy. Price, 1 to 9, 60c each. 10 or more, 50c each. Money back if not satisfied in 30 days.

WEST BRANCH APIARIES, Grover Hill, Ohio.

QUEENS

Have exhausted our supply of package bees for this season, and everyone is satisfied, because they received them on time and they are all they could expect.

We have turned our entire attention to the queen yard, and will be ready for your rush orders with our three-banded Italian queens. They are pleasing the most exacting. If you don't like them on arrival, return them and get your money.

50c each, balance of season.
15% discount to dealers.

• • •

Shaw & Homan
SHANNON MISSISSIPPI

Root's

NORTHERN-RAISED

BEES

GET FRESH YOUNG BEES FOR THE HONEY FLOW.

DO NOT GAMBLE WITH YOUR PROFITS BY USING WEAK COLONIES OR POOR BEES.

THE A. I. ROOT COMPANY
MEDINA, OHIO

Root QUALITY BEE SUPPLIES

Going to Lansing ! !

WE HAVE JUST RECEIVED A SHIPMENT OF—

ROOT QUALITY BEE SUPPLIES

and can give you fine service on your needs. Incidentally, while you are in Lansing, you can visit the Agricultural College.

PRICE!
MAIL ORDER BRAND AT LANSING. GET OUR PRICES. SAVE MONEY!

OUR PRICES ARE THE LOWEST

For merchandise that gives absolute satisfaction. Roots have been making bee supplies for over 60 years. The thousands of satisfied Root customers is your best guarantee.

M. H. HUNT & SON
510 North Cedar Lansing, Michigan

Root QUALITY BEE SUPPLIES

PACKAGE BEES—QUEENS
CAUCASIANS—ITALIANS

We are prepared to fill your rush orders with the best queens it is possible to produce, and young worker bees reared under most favorable conditions. Satisfied customers in every state. Untested queens, 50c each; two-pound package, $1.95; three-pound package, $2.55.

THE COFFEY APIARIES
WHITSETT, TEXAS.

(Continued from page 325.)

Most lots, however, are being held firmly for higher prices than were being paid earlier in the season. Dealers in consuming markets generally have adequate supplies of extracted honey for the time being, but very little comb honey.

GASPARD'S

Queens and Package Bees for June 1st and the balance of the season.

2-lb. package with queen.....$1.95
3-lb. package with queen.....$2.55
Young select queens.....50c

J. L. GASPARD, HESSMER, LA.

Quality - Service - Prices

——Package Bees and Queens—Italians, Caucasians——

Are you one of our many satisfied customers? If not, give us one order. It will take only ONE. Direct Express Service.

2-LB. PKG. WITH QUEEN..$1.95 3-LB. PKG. WITH QUEEN..$2.55
SELECT LAYING QUEEN.....50c
For queenless packages, deduct the price of queen.
15% discount to approved dealers.

WEAVER APIARIES, NAVASOTA, TEXAS
Agents for Pinard Nailess Queen Cages.

WALTER T. KELLEY

QUICK

You can count on me shipping your order, large or small, the day it is received. My prices are substantially lower on soft white pine **BEE HIVES, HIVE BODIES, HOFFMAN FRAMES, SUPERS, COMB FOUNDATION, SECTIONS, MISCELLANEOUS ITEMS.**

Freight Shipments from Paducah to most stations in **MISSOURI, ILLINOIS, INDIANA, MICHIGAN, WISCONSIN, OHIO** will be delivered in three days for less than 75c per 100 pounds. In most cases to New York, Pennsylvania and West Virginia in five days, for less than 85c per 100 pounds.

Count on me shipping your order quickly. Count on me saving you money. Count on me satisfying you completely. Free catalog if you do not yet have one.

The Walter T. Kelley Co., Paducah, Kentucky

Knight's

Dependable Queens

TREAT YOURSELF to THE BEST

Line-bred, Three-banded Leather-Colored Italians, Accredited and Certified by Alabama State Department of Agriculture.

They are extra large, producing large bees. All queens carefully reared and are the best that can be produced.

All queens guaranteed mated pure.

PRICE POST PAID Select (one grade), 50c. 15 per cent discount to dealers. No charge for clipping. No disease. Prompt shipments.

Jasper Knight, Hayneville, Alabama

NORMAN'S

PACKAGE BEES AND QUEENS

Via Return Mail

QUALITY, SERVICE, EXPERIENCE

Try John A. Norman's 3-banded Italian bees and queens in your apiaries during the coming season. They not only will increase your bees, but also your honey profits. My bees are inspected and health certificate furnished with each order. I ship only young baby bees and in light convenient cages. Shipped on time and full weight on arrival. My queens are purely mated and reliable. Satisfaction guaranteed or your money refunded. F. O. B. express, shipping point, Ramer, Alabama.

June 1 to October 1.

Untested queens, 50c each. Tested queens, $1.00 each. 2-lb. package with queen, $1.95 each. 3-lb. package with queen, $2.55. 15% discount to all dealers. All packages 10% overweight.

JOHN A. NORMAN, LA PINE, ALA.

THE BEE WORLD—The leading bee journal in Great Britain, and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, 10/6. The Apis Club, Brockhill, London Road, Camberly, Surrey, England.

SOLVING BEEKEEPING PROBLEMS

(Continued from page 331.)

ets from three and a half feet to seven feet in length, two inches wide and six inches apart. In time these pickets would be blown off or otherwise destroyed and I adopted another scheme of planting small mulberry trees six feet apart and letting them grow up without trimming to act as a windbreak in the summer and a snow fence in winter. I procured 75 of these small trees about two feet in height and about half the size of a lead pencil for a few dollars. These were set in the ground six feet apart by boring holes eighteen inches deep in the ground with a posthole auger. About two inches of each tree remained above ground. Several of my good friends told me that trees would never grow if planted in that manner. Seventy-four of the seventy-five grew and the hedge is now four years old. Under the snow bank along the fence were twenty-five colonies of bees when the picture was taken as warm as a bug in a rug. In fact, the same twenty-five colonies that are shown in the summer scene of the apiary.

I have had many fads, trap shooting, revolver shooting, rifle shooting, casting, fishing, etc., all of them intensely interesting and health giving, but they cost me a lot of money. When I took up bees as an avocation, I found them just as interesting, if not more so. The stings cured my rheumatism and at three score years and five I feel fit as a fiddle with as much interest in life as ever, and in case I become incapacitated as far as my vocation is concerned, I still have something to fall back on that will make me a living.

Ontarioville, Illinois.

[In place of a single thickness muslin we recommend several thicknesses of wet cheesecloth. Even these should be renewed often with fresh cheesecloth, as the old ones will clog up soon with wax particles and debris. This point can not be emphasized too strongly. And again, the honey falling in fine streams from the strainer cloths should not fall through several inches of air space carrying down into the body of the honey fine air bubbles. It is these minute bubbles that cause cloudiness of the honey. Your strainer arrangement will avoid these small air bubbles if the strainer, metal part and all, extends down into the honey. The tank while straining, should never be more than half full. You did not mention the reason for this.—Editor.]

50 CENTS each for good three-band Italian Queens that must please the customer.

D. W. HOWELL, SHELLMAN, GA.

50c Queens

Finest Quality Brand Italians
Quick Service and Satisfaction.
1910—Old Reliable Breeder—1936

GEO. H. MERRILL
Route 1, Greenville, S. C.

ITALIAN CAUCASIANS

Package bees and queens for June shipments. 2 lbs. with queen, $1.95. Queens, 75c. 3 lbs. with queen, $2.55. Additional bees, add 60c per lb. We support the American Honey Institute on orders shipped.

E. W. PETERSON
Honey Bee Apiaries, Sandwich, Ill.

SEND US YOUR ORDERS FOR LABELS.
30 DESIGNS TO SELECT FROM.
THE A. I. ROOT COMPANY, MEDINA, OHIO

Reliable Service, Reliable Package Bees and Queens

Three Band Italian Bees and Queens
Price List, Via Express Collect

2-lb. package bees with select untested queen .....$1.95 each
3-lb. package bees with select untested queen .....$2.55 each
Select Untested Queens...50c each
Select Tested Queens...$1.00 each

Prices of package bees via mail quoted on request.

15% discount on the above prices will be allowed dealers on bees for re-sale.

Support the American Honey Institute.

Formerly Hayneville Apiary Co.

W. E. HARRELL
HAYNEVILLE, ALABAMA

"BETTER-BRED QUEENS"

3-Banded Italians

We are prepared to handle your rush orders. Don't hesitate to send them to us. Raising queens and shipping packages is our only business. Not a side-line. We have left no stone unturned to give you the best queens obtainable and good, honest, well prepared packages. Give us a trial and be among our many satisfied customers.

Prices for Untested, Select Queens....50c 2-lb. packages with queen.....$1.95
3-lb. packages with queen.....$2.55 4-lb. packages with queen..... 3.15
Dealers wanted in all localities. Dealer's discount, 15%.

Calvert Apiaries, Calvert, Alabama

QUEENS NOW 50c BY RETURN MAIL

Norman's Queens and Bees Have Satisfied Thousands of Beekeepers.

In 1919, I was discharged from the U. S. Army; in 1920, I went into the bee business; in 1921, I began shipping bees and queens to the northern states and Canada. I am glad to say up to now that many of my customers seem like personal friends. I am in my life's work and will expect to do business with you and my customers again with a strain of pure Italian bees and queens, with an unsurpassed record for honey-gathering in many parts of U. S. and Canada. All packages F. O. B. express. I ship in light weight cages with full weight of baby bees, health certificate with each shipment, all queens guaranteed purely mated, safe arrival, and satisfaction in U. S. and Canada, or your money back.

Untested.....50c each.
2-lb. pkg. with young queen..$1.95 each. 3-lb. pkg. with young queen, $2.55 each.

THE NORMAN APIARIES, LAPINE, ALABAMA

TALKS TO BEGINNERS

(Continued from page 365.)

Some producers of comb honey say that the top-supering method works in the production of comb honey. We have never given it a trial. We would be afraid that this method of supering might result in travel-stained sections, because when the bees pass over the sections that are capped, in order to work on the empty supers on top, the cappings of the sections in the supers next to the brood chamber may become darkened. However, this top-supering method for comb-honey production is worth trying, on a moderate scale, at least. There appear to be some disadvantages and possibly there may be some advantages that we are not aware of.

Fresh From Our Yards

We can make prompt shipment of Italian queens and package bees.

Untested queens	$0.50
Tested queens	1.00
2-lb. pkg. with queen	1.95
3-lb. pkg. with queen	2.55
Additional pound of bees	.60

For queen packages deduct price of queen.

Citronelle Bee Co., Inc.
J. T. Haertel, Mgr.
Citronelle, Ala.

J. F.
McVay
Jackson, Ala.

Offers

FINEST ITALIAN QUEENS
AT 50c EACH
and
JUNE PACKAGES

2-lb. pkg. with queen..... $1.95 each.
3-lb. pkg. with queen..... $2.55 each.

PACKAGE BEES
QUALITY
QUANTITY
HEALTH
SERVICE
15% discount to approved dealers.

Bright Italian Queens, 50c

None but young and vigorous select laying queens. Prompt and efficient shipment.

• • •

PRICES FROM JUNE 1st:

2-lb. pkg. with laying queen	$1.95
3-lb. pkg. with laying queen	2.55
Laying queens, each	.50

Garon Bee Co., Donaldsonville, La.

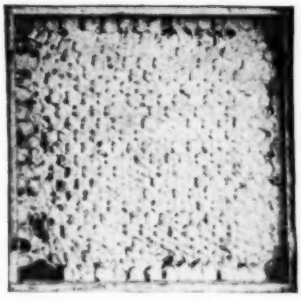
"The 'Queen' of the Crop!"

——One of our queen yards——

We don't have to tell you how important a queen is. But we WOULD like you to know that we have quality queens and can deliver them promptly.

THE PUETT COMPANY, HAHIRA, GEORGIA

"Where Satisfaction is a Certainty"



BE NOT DECEIVED

WITH SO-CALLED BARGAIN PRICES

--the number of folded sections determines the cost

SEND FOR FREE SAMPLE

Root QUALITY BEE SUPPLIES

The A. I. Root Company

Medina, Ohio

Root QUALITY BEE SUPPLIES

That Weak Hive Can Be Made Profitable, Too

Add a package of young bees and watch that weak hive perform. We are prepared to make prompt shipment on all orders. Replace those old failing queens and make increase now. New low prices.

•

2-lb. package with queen.....$1.95
3-lb. package with queen..... 2.55
Untested queens .....50c each

•

J. M. Cutts & Sons
R. F. D. No. 1.
MONTGOMERY, ALA.

Queens

Old Reliable
3-banded Italians
They Satisfy
23 Years a Breeder

There is a big difference in QUEENS.
BALANCE OF SEASON.....50c EACH

JOHN G. MILLER
723 C STREET, CORPUS CHRISTI, TEXAS

WHAT ABOUT COMB HONEY?

(Continued from page 332.)

dered. If a few of his customers asked for comb honey he kept it, at least five or six months during the fall and winter. Today we find the store belonging to a chain and run by a manager, whose principal aim is to show a profit and hold his job. He is told what to handle, and how it is to be done. The constant aim is quick turn-over, and the way most of them want to handle comb honey is to make a specialty for a few weeks in the fall and then forget it for a year. My experience with them is that you can sell them ten-ounce junk honey at $2.00 per case, if wrapped in cellophane, a lot quicker than you can twelve-ounce extra fancy at $2.75. Incidentally, this business of wrapping comb honey that ought to go into the capping melter and foisting it on the public has not helpe the sale of the better article. After a few experiences of this kind, that pride of craftmanship that Mr. Clay mentions, goes the way of a punctured tire.

Caldwell, Idaho.

Mott's Northern-Bred Italians

Eliminate that swarm nuisance. Free list.
Guaranteed purely mated.

June, July, $1.00; 2 or more, 75c each; 50, $35.00; $100, $65.00. Fair to good breeders, $2.00, $3.00, $5.00. Virgins, 40c. Satisfaction guaranteed.

E. E. MOTT, GLENWOOD, MICH.

ITALIAN
BEES AND QUEENS
"Good or Made Good"
ALONZO McKAY
Rt. 1. VICKSBURG, MISSISSIPPI
Inquiries cheerfully answered.

Queens and Package Bees

PURELY MATED 3-BANDED ITALIANS
Any number packages and queens shipped the day you want them.
Code prices, less 15% to dealers.

FACTORY TO CONSUMER

Let us quote you on your bee supplies.
We can save you money on "Tidewater Cypress Lumber."

OVERBEY APIARIES, LEONVILLE, LA.

FINE ITALIAN
Queens and Package Bees

—ANY NUMBER—

Fresh from our yards—direct to you promptly.

Italian queens, each 50c
2-lb. package with queen, each $1.95
3-lb. package with queen, each 2.55
2-lb. package WITHOUT QUEEN, each 1.45
3-lb. package WITHOUT QUEEN, each 2.05

15% discount to dealers. No disease known here.

Holder Apiaries, Citronelle, Alabama

FOR SALE

PURE ITALIAN QUEENS & BEES
Nothing But the Best

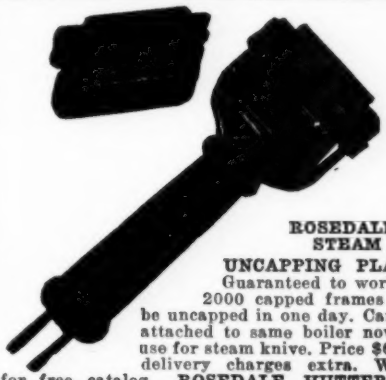
Bright Yellow and 3-banded
Queens, 50 cents each.

1 lb. of bees with young queen. $1.40
2 lbs. of bees with young queen, 1.95
3 lbs. of bees with young queen, 2.55

You send for them, they go.

GRAYDON BROS.

Route 2. Greenville, Ala.



ROSEDALE STEAM UNCAPPING PLANE

Guaranteed to work. 2000 capped frames can be uncapped in one day. Can be attached to same boiler now in use for steam knive. Price $6.50, delivery charges extra. Write for free catalog. ROSEDALE HUTTERIAN MUTUAL CORPORATION, Elie, Manitoba.

Diamond Match Co., Los Angeles, Calif., are our dealers for the Western States.

12-Month Subscription with Bee Primer - - $1.00

American Bee Journal—monthly; published and edited by beekeepers for beekeepers. Full of pictures and tips on care of bees and selling of honey. SAMPLE COPY FREE.

Full 12-month subscription, with BEE PRIMER—22-pages, illustrated booklet to help the beginner—BOTH FOR $1.00. Combined with Gleanings in Bee Culture—both magazines and Primer, ONE YEAR, $1.60. This offer good only in the United States. Address—

American Bee Journal, Hamilton, Illinois

XUM

. . . . . I T TELLS HOW . . . . .

To Give a Honey Demonstration!

What food made with honey shall I demonstrate?

What samples should I serve my audience?

What type of honey exhibit shall I have?

What shall I say while demonstrating?

Shall I give nutritional references to honey?

Shall I include a beeswax exhibit?

What recipes shall I give my audience?

These questions and many others are answered in the six-page Institute Release on "Honey Demonstrations."

Now that the county and state fair season is approaching, we suggest that you bring your fair exhibits up-to-date by including such a demonstration.

It isn't enough to just talk and show honey these days. It's the results to be obtained from the use of honey in which your consuming public is interested. Public good will and consumer confidence—priceless possessions—may be created through honey demonstrations. You know how essential good will and confidence are in the establishment of a stable honey market.

Twenty cents in postage stamps, your name and address brings you the Honey Demonstration Outline.

The American Honey Institute

Madison ***Wisconsin***

American Honey Institute Honor Roll

Missouri—Chas. F. Bigford, Kansas City, $1; W. P. Dowdy, Hornersville, $2; Archie Fitzgerald, Webster Groves, $1.15; E. B. Gladish, Higginsville, $10; O. C. Hale, Higginsville, $5; H. A. Kelm, Webster Groves, $1; *J. E. Lees, Versailles, $2; Harold L. Nebel, High Hill, $2; St. Louis & St. Louis Co. Bee Assn., St. Louis, $5. Total, $29.15.

Montana—Chas. E. Criger, Livingston, $4; Paul Daellenbach, Brookside, $1; I. B. Miles, Whitehall, $1; Hiram Miller, Helena, $1; Arthur F. Smith, Livingston, $2.25. Total, $9.25.

Nebraska—H. B. Allen, Cozad, $5; O. S. Bare, Lincoln, $5; Ralph W. Barnes, Morrill, $10; LeRoy Baxter, Blair, $1; V. W. Binderup, Minden, $2; Wayland Case, Gordon, $3.60; Charles Cavett, Bayard, $5; Merritt B. Cook, Arlington, $10.56; Otto Feeken, Crete, $1; L. M. Gates, Lincoln, $2.75; C. A. Hamilton, Salem, $1; J. H. Lutes, Stapleton, 10; William T. Malmrose, St. Libory, $2; C. A. McGuire, Lincoln, $2; W. L. Porchet, Mitchell, $1; F. Powell, Minatore, $1; V. Reeder, Chapman, $1; J. H. Sturdevant, St. Paul, $1; E. E. Throop, Lincoln, $1; R. H. Walstrom, Omaha, $30; C. Warga, Plattsmouth, $3; James E. Warga, Pattsmouth, $1; Watt & Sidwell, Kearney, $7.60; A. T. Wilson, Arcadia, $2.50. Total, $110.01.

Nevada—Churchill County Bee Assoc., Fallon, $6.79; J. E. Patton, LaMoille, $11.89; Washoe County Beekeepers' Assoc., Reno, $2.26. Total, $20.94.

New Hampshire—Elmer E. Crawford, Manchester, $1; L. C. Powers, Monroe, $1; P. N. Townsend, Lebanon, $1. Total, $3.

New Jersey—*W. Allen, Bernardsville, $1; Anonymous, $6; Arthur L. Axtell, Roseland, $1; Richard Barclay, Riverton, $15; H. S. Black, Glen Ridge, $1; Henry Brown, Cape May, $1; E. G. Carr, Pennington, $1; John Conner, Caldwell, $1; F. E. Crispin, Eatontown, $1; Essex County Beekeepers' Society, Bloomfield, $16.57; Robert S. Filmer, Stelton, $1; Ira Foster, Elmer, $1; Wm. P. Fritz, Orange, $1; Chas. F. Gottlick, Westfield, $1; W. J. Haight Irvington, $1; Albert G. Hann, Glen Gardner, $1; C. A. Hansen, West Orange, 1; A. J. Hausenbauer, Hopewell, $2; C. L. Hawk, East Orange, $1; Paul L. Holcombe, Lambertville, $1; G. F. Jordy, Flemington, $1; C. W. Kautz, Paterson, $1; Ross E. Mattis, Riverton, $1; G. F. Miller, Rosell Park, $1; John I. Nelson, New Brunswick, $1; New Jersey State Beekeepers' Assoc., Pennington, $72.84; Fred Nucks, Paterson, $1; Max Pfueller, Hammontown, $1; Fred C. Schlather, Newark, $1; J. H. Schroder, Essex Falls, $1; Mrs. Loma Schwoebel, Pomona, $1; Leslie Thron, Irvington, $1; Geo. Whitmore, Pompton Lake, $1. Total, $140.41.

New Mexico—E. T. Israel, Farmington, $1.

New York—Adams & Myers, Ransomville, $5; Paul H. Allen, Peru, $1; F. L. Barber, Lowville, 50c; G. W. Belden, Berkshire, $5; W. S. Bell, Heavener, $1; Henry F. Bellamy, Syracuse, $1; Angus Carruther, Syracuse, $1.00; H. L. Case, Canandaigua, $1.00; Theron A. Chase, Valley Stream, $1; Geo. Chrysler, Homer, $3.60; Everett H. Clark, Warsaw, $1; John W. Coe, Guilford, $1; Archie L. Cogshall, Ithaca, $10; Brown B. Coggshall, Groton, $25; J. Collier, Coxsackie, $1; Cortland County Beekeepers' Assoc., Dryden, $3; Elmer E. Crane, Marion, $3; Walter B. Crane, Dover Plains, $5; H. C. Davis, Falconer, $15; F. W. DeTemple, Darien Center, $5; L. A. Depew, Auburn, $1; W. J. Dietrich, Brooklyn, $1; A. Gordon Dye, Rochester, $15; Lewis J. Elwood, Ft. Plain, $5.65; Empire State Honey Producers' Assoc., Syracuse, $117.88; M. H. Fairbanks, Homer, $3.60; John S. Ferguson, New York City, $1; Arthur L. Freeland, Dunkirk, $3; H. B. Gable, Romulus, $7.20; F. W. Gravely, New York, $1; Howard Grimble, Holcomb, $10; E. W. Gutekunst, Colden, $5; C. B. Howard, Geneva, $3.30; E. E. Hutchins, Massena, $2; L. S. Hutchins, Massena, $1.90.

(This space donated to American Honey Institute by Gleanings in Bee Culture.)

Italian Queens

The package season for 1936 is practically over, so next we turn our thoughts to supplying you with the best in queens. We have every facility for rearing good queens—well equipped queen yards, experienced breeders who are instructed to spare no expense to produce the best, and the best strain of Italian bees we have been able to produce through years of selection.

Order one, one hundred, or one thousand, it will have the same prompt attention.

——PRICES——

Untested Queens, 50c each.
15% discount to dealers.

■

Better try a few June packages of bees. They are much cheaper now.

——PRICES——

2-lb. pkgs. with queens.....$1.95
3-lb. pkgs. with queens..... 2.55
15% discount to dealers.

■

Write for catalog of cypress bee supplies. You will be pleased with the quality and price.

The Stover Apiaries

Mayhew, Mississippi

Queens - Italian - Queens

Guaranteed Delivery

•

Market Agreement Prices

Now Is the Time to Requeen

MERRILL BEE COMPANY, BUCATUNNA, MISS.
MISSISSIPPI'S OLDEST SHIPPER.

3-BANDED

ITALIAN QUEENS and PACKAGE BEES

Shipped the day you want them. Better service, higher grade packages and queens. Special night express insures few losses. Health certificate with each shipment.

Untested queens, each...$0.50
2-lb. pkg. bees with queen 1.95
3-lb. pkg. bees with queen 2.55
Each additional lb. of bees .60
For queenless packages deduct price of queen.

For immediate shipment send your order to

W. O. GIBBS COMPANY
Box 81, Brookfield, Georgia

Attention, Please!

Here we are again, **STEVENSON'S GOLDEN ITALIAN QUEENS**, raised the very best way in Southern Louisiana, where we have a very early and continuous honey flow.

This natural environment causes our bees to feed us abundantly with just the right food to develop us properly and make us: **REAL QUEENS OF QUALITY.**

Our progeny are large, very gentle, and the best of honey producers. Write **STEVENSON'S APIARIES, WESTWEGO, LA.**, for descriptive circular. Quotations on package bees and queens as per Marketing Agreement.

MOUNTAIN GRAY CAUCASIAN QUEENS, GUARANTEED PURELY MATED, 50c EACH. WRITE FOR FREE CIRCULAR.
CAUCASIAN APIARIES, BROOKLYN, ALABAMA.

CHOICE THREE-BANDED ITALIAN QUEENS

Big, prolific queens. Give our queens a trial, and be convinced that they are as good as the best. 50c each. 15 per cent discount to dealers.
A. M. KELLY, BELL, FLORIDA.

....THRIFTY....

three-banded Italian bees and queens for June delivery. Our Thrifty bees are guaranteed to please. We ship full weight packages of young bees. Our crates are light but strongly constructed.

• • •

2-lb. package with queen.....$1.95 each.
3-lb. package with queen..... 2.55 each.
Untested queens ..... .50 each.
15% discount to dealers.

• • •

Our forty-four years' experience assures you of the finest stock and best of service.

• • •

Wire your rush orders and be sure of quick delivery.

• • •

W. J. Forehand & Sons, Fort Deposit, Alabama
Breeders since 1892.

Success
or
Failure

Depends on the QUEEN. Let us supply you with your queens this summer. We have been shipping thousands of queens yearly since 1920. We have customers who use our bees and queens every year and are always satisfied. You, too, will be pleased with our queens and service, so let your orders come. We will ship immediately.

Selected untested queens....$0.50 each
Selected tested ..... 1.00 each
Can also supply some packages at $1.95 for two pounds, and $2.55 for threes.

N. B. SMITH & COMPANY
CALHOUN, ALABAMA

Caucasians

Extra gentle, prolific, long tongue, little inclined to swarm, dependable workers—10% to 40% ahead of Italians. Wintered here out-of-doors and bred in a climate like their native land—severe winters—cold windy springs—thus insuring their good qualities. Foundation stock from mountainous province of Terek, Caucasus.

Carniolans

prolific at all times, very gentle, best of winterers, build beautiful white combs, most excellent workers. My Carniolan queens headed colonies producing 435 lbs. extracted over the whole yard. 28 years with them. Have supplied many State Agricultural Colleges and Experiment Stations with them. My own and Jan Strgar imported strain.

Prices, Both Races:

Untested, 1 to 5, 60c each; 6 or more, 50c each. Tested, $1.00 each. (Foreign countries, untested, $1.00 each; Tested, $1.50 each.)

Both races withstand northern winters and changeable springs better than Italians. Both races build up more readily during the unfavorable springs of our eastern and northern states and are ready for the early flow. Both races will improve Italians in gentleness and honey gathering.

ALBERT G. HANN
GLEN GARDNER, NEW JERSEY

JENSEN'S

June Packages and Queens

Booster packages added to those colonies that just didn't reach the peak in time, can be made equal to the best and thus be made to pay big dividends in increased per colony average, which is what counts, and not the occasional outstanding colony.

A worthless queen killed and a new one installed along with a package of (baby) bees, will make any weak colony whoop it up and cry for more supers.

Any time is good re-queening time when there are indications of failing, or undesirable characteristics. Next to production, we have bred our bees up mainly for gentleness, color coming third. The queens are very large and beautifully colored clear to the tips, and throwing bees unusually uniformly marked, with no trace of goldens, yet not too dark.

PURE THREE-BANDED ITALIANS ONLY
PRICES AFTER JUNE 1ST:

2-lb. package and select young queen	**$1.95 each.**
3-lb. package and select young queen	**2.55 each.**
2-lb. Booster Package (queenless)	**1.45 each.**
3-lb. Booster Package (queenless)	**2.05 each.**
QUEENS—Select Untested	**.50 each.**

Read on: During our annual requeening we find many queens really too good to be killed but which we dare not continue another year in our package colonies. While they last we are going to send free two select tested queens to anyone sending us $1.00 for their membership in the American Honey Institute. Think of it! Two fine queens and a chance to help the only non-profit organization in the U. S. seeking only to promote the uses of honey. Every penny of your dollar will go to the Institute.

Jensen's Apiaries, Macon, Mississippi

INDEX TO DISPLAY ADVERTISEMENTS

Alabama Apiaries 371
Alamance Bee Co. 370
American Bee Journal 379
American Honey Institute 380
Bolling Bee Co. 370
Calvert Apiaries 375
Caucasian Apiaries 382
Citronelle Bee Co. 376
Coffey Apiaries 373
Continental Can Co. ..... Inside front cover
Crowville Apiaries 370
Cutts & Sons, J. M. 378
Dadant & Son..s 328
Edwards Mfg. Co. 371
Ellison, C. G. 371
Fahlbeck, Ernest 323
Falconer Mfg. Co., W. T. 370
Forehand & Sons, W. J. 383
Garon Bee Co. 376
Gaspard, J. L. 373
Gibbs Co., W. O. 382
Graydon Bros. 379
Hann, Albert G. 383
Harrell, W. E. 375
Hilbert, Jas. E. 327
Holder Apiaries 379
Honey Caramel Co. of America 370
Howell, D. W. 375
Hunt & Son, M. H. 372
Hazel-Atlas Glass Co. ..... Inside back cover
Jensen's Apiaries 384
Kelly, A. M. 382
Kelley Co., The Walter T. 373
Knight, Jasper 374
Lotz Co., August 323
McKay, Alonzo 378
McVay, J. F. 376
Merrill Bee Co. 382
Merrill, Geo. H. 375
Miller, John G. 378
Mott, E. E. 378
Muth Co., The Fred W. 322
Norman Apiaries 375
Norman Bros. Apiaries 370
Norman, John A. 374
Overbey Apiaries 378
Peterson, E. W. 375
Puett Co. 377
Root Co., The A. I. ..... Back cover, 372, 377
Root Co. of Chicago, A. I. 322
Root Co. of Indianapolis, A. I. 327
Root Co. of Iowa, The A. I. 327
Root Co. of Syracuse, A. I. 322
Rosedale Hutterian Mutual Corp. 379
Running, David 371
Schmidt, Oscar H. 323
Shasta Apiaries 371
Shaw & Homan 372
Simmons Apiaries, E. A. 370
Smith & Co., N. B. 383
Stevenson Apiaries 382
Stover Apiaries 381
Superior Honey Co. 326
Taylor Apiaries 371
Thagard Co., The V. R. 371
Weaver Apiaries 373
West Branch Apiaries 371
White Pine Bee Farms 371
Williams Bros. Mfg. Co. 323
Williamson & Walton 323
Woodman Co., A. G. 327
York Bee Co. 324